HOSPITAL Topics

GRAPHIC REPORTING ON TODAY'S HOSPITAL PRACTICES

J. Mosher, Jr. (see page 5)

How Ohio Hospital Controls Costs

page 32

Resistant Infections: Symposium Report

page 37

Data Processing For Hospitals

A New Series

page 45

BUYER'S GUIDE Page 74

The News Magazine for Hospitals

JANUARY | 1959

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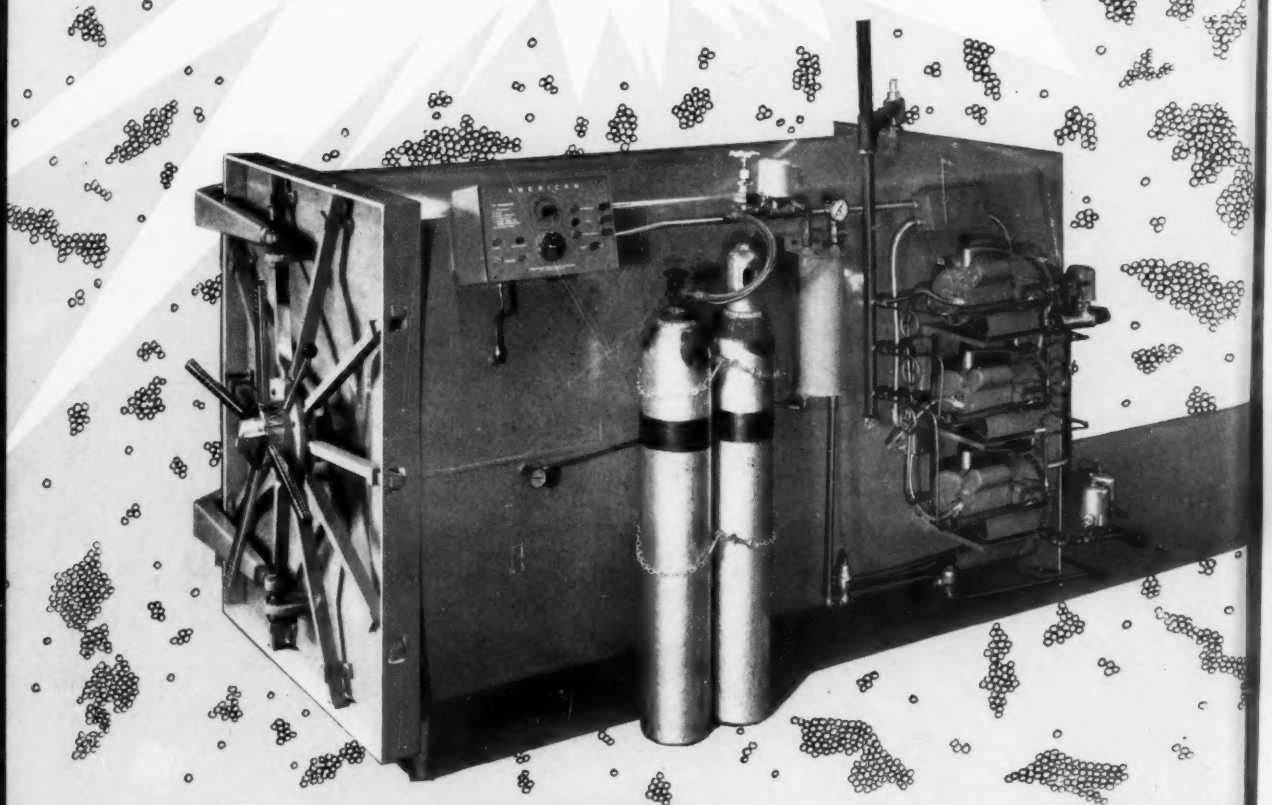

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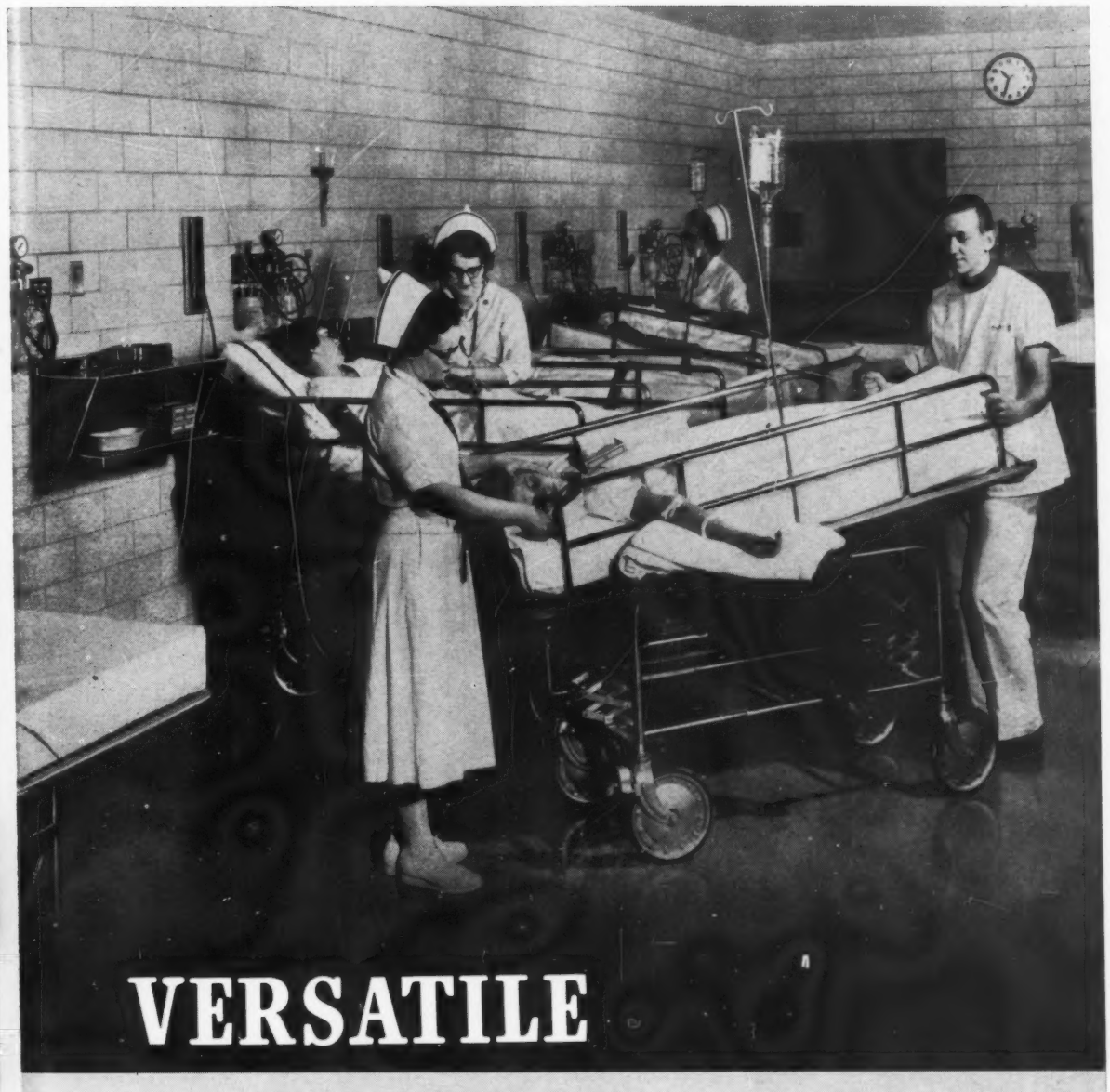

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JANUARY, 1959, VOL. 37, NO. 1

Hospital Moves — page 48

O.B. Dept. — page 100

FEATURES

Administrator's Digest 19

American Medical Association 19

Association of Military Surgeons of the U.S. 23

Inhalation Therapists Convention 25

American Heart Association 26

Illinois Hospital Association 28

How One Ohio Hospital Controls Its Costs 32

Combatting Drug-Resistant Organisms 37

How Electronic 'Brains' Can Work for Hospitals 45
John H. Gorby

Hospital Moves, Patient Care Goes On 48

Health Insurance Newsletter 51
State Sen. George R. Metcalf

Nursing Services in the Hospital 55
III. Central Supply—Nerve Center of the Community Hospital
John H. Gorby

DEPARTMENTS

Scanning the News 7

News Briefs at Press Time 9

Calendar of Meetings 10

(Continued on page 5)

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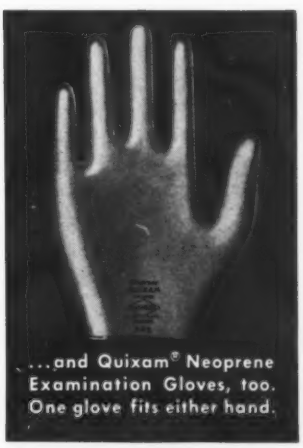

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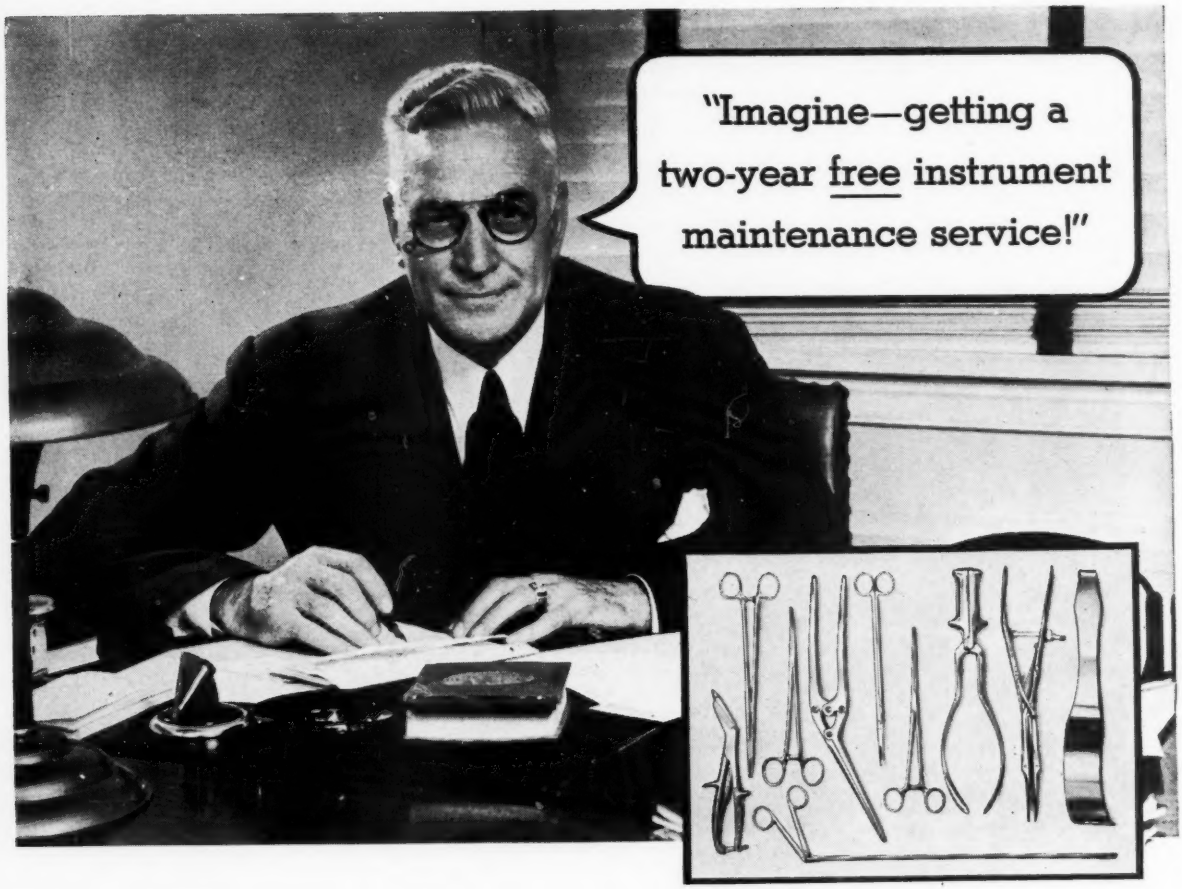

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TABLE OF CONTENTS

(Continued from page 2)

Consultant's Corner 60
John G. Steinle

Review of Hospital Law Suits..... 61
Leo T. Parker

Personally Speaking 66

Buyer's Guide 74

Films, New Literature..... 82

The Pharmacy 84
Prescription Pad
Clinical Notes

The Lab 87
American Association of Blood Banks

Pediatrics 97
'Play Therapy' Program Helps Child Adjust to Hospital

O.B. Department 100
Informative Pamphlets Make Patients' Stay More Pleasant

Central Supply 127
Dr. Walter to Address CSR Program at AORN Congress

Trade Topics 130

Book Corner 134

OPERATING ROOM

They'll Make You Feel at Home in Texas.....107

The President Says.....108
Pauline R. Young, R.N.

Introducing Your AORN Speakers.....112

Nominees for AORN Offices.....114

Program for 6th AORN Congress.....116

A Glossary of the Microbe World.....119
Paul F. MacLeod, M.D.

O.R. Question Box.....120
Carl W. Walter, M.D.

O.R. Problem Clinic.....125
Edith Dee Hall, R.N.

HOSPITAL Topics

PERSONALITY OF THE MONTH

C. J. "Jack" Mosher, Jr., administrator of the Salem City Hospital Association, Salem, Ohio, for the past seven-and-one-half years, is an executive possessed of unquenchable enthusiasms. These have made it inevitable that he visualize his job as one of large horizons, and the hospital—all hospitals—as big business. But the enthusiasms are firmly held by the reins of common sense, so that the forces of dreaming and doing pull equally and evenly to a common destination.

This dual drive has resulted in reduced costs of operation and patient room rates in the 105-bed Salem City Hospital, while concurrently raising nurses' wages to the highest scale in northeast Ohio.

It has culminated in the substitution of a school of practical nursing for the hospital's professional school which, founded in 1913, had graduated 280 registered nurses by 1957.

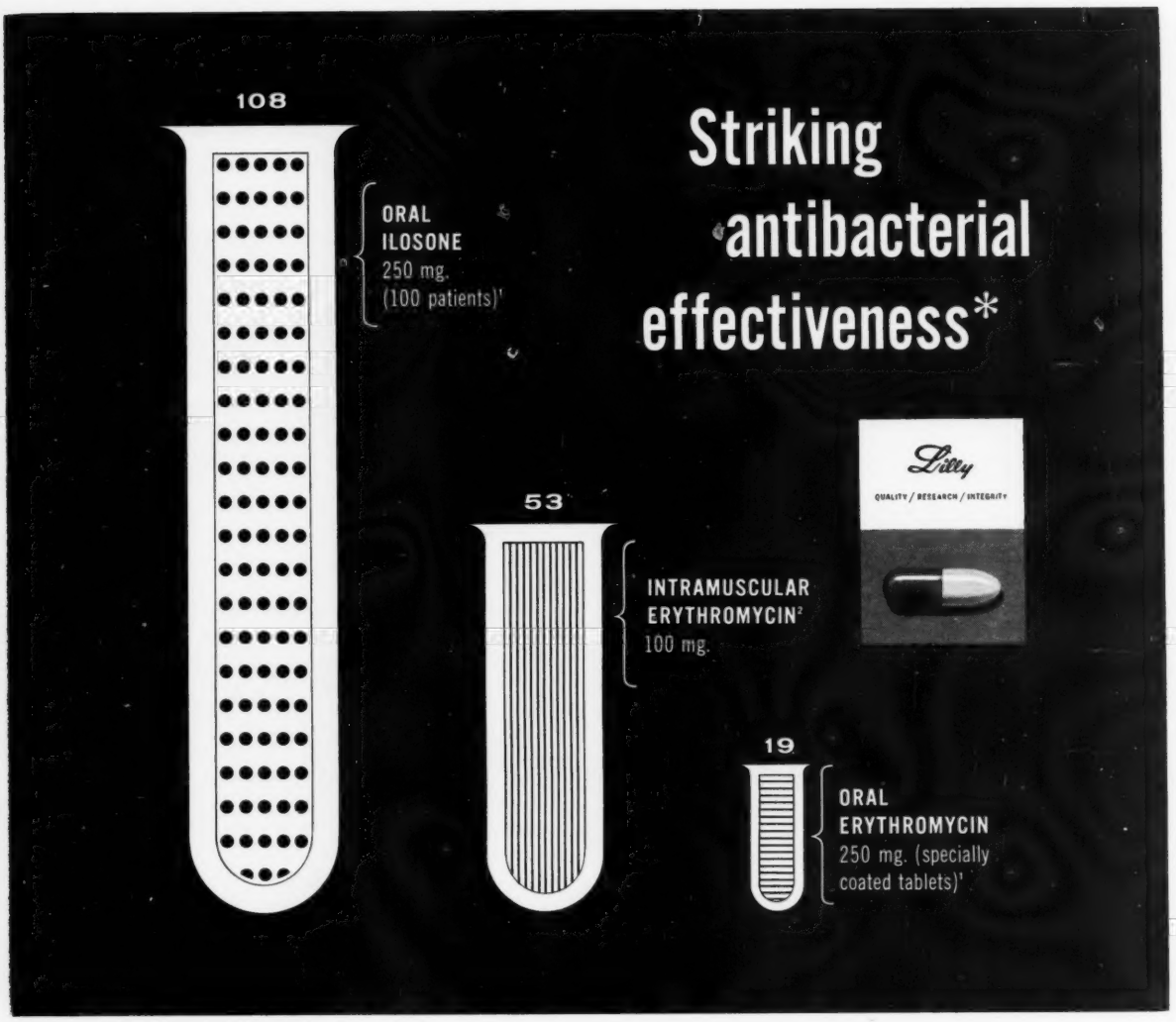
Prior to his Salem appointment Mr. Mosher served as executive assistant at Children's Hospital, Columbus, Ohio, for three years. For two years, he was supervisor of research and hospital registration, Division of Hospital Facilities, Ohio Department of Health.

A graduate of Ohio State University with a B.S. degree in business administration, he served as lieutenant in the Army Medical Administrative Corps for 42 months.

This year he is serving as a member of the Ohio Hospital Association's small hospitals committee, and in 1956 was chairman of its resolutions committee. He is a member of the American College of Hospital Administrators.

Married to his college sweetheart, Bonnie, and the father of three children, Susan, 16, Chip, 11, and Kim, 1, Mr. Mosher's hobbies are golf, swimming, and chess.

Extra-curricular activities are "keeping up with the wonders of the adolescent and infant mind, and Bonnie's remodeling of our home—which occasionally confuses, but never fails to stimulate me."



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1. Griffith, R. S., *et al.*: Antibiotic Med. & Clin. Therapy, *5*:609 (October), 1958. Note: Peak levels with the oral erythromycin tablets (thirty-three dilutions) were not observed until four hours after administration. 2. Data from Griffith, R. S.: Antibiotics Annual, p. 269, 1954-1955.

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HOSPITAL Topics
The News Magazine for the Hospital Staff

JANUARY, 1959
VOL. 37, NO. 1

Scanning the News

Plastic Artificial Eye Moves Like Normal One

Custom-made plastic artificial eyes that move in the eye cavity like normal eyes are now in use.

Movement of the artificial eye is accomplished by attaching the muscles of the eye to a surgically implanted sphere in the eye socket. Hence, when the sphere moves, it presses against the fitted eye, which has been placed in front of the sphere.

Developed by the Army Medical Service, the eye is made from a synthetic resin material similar to that used by dentists to construct dentures. It can be moved in the eye socket to correspond to the movement of the remaining normal eye. In addition, use of plastic avoids painful irritation caused by body acids' etching glass, and also avoids problems arising from extreme temperature changes.

Asian Flu Factor In Death Rate Increase

The 1957-1958 epidemic of Asian influenza produced an appreciable increase in the total death rate, according to Metropolitan Life Insurance Co. statisticians, who have been charting the course of the epidemic through policyholder experience.

Among the company's industrial policyholders, the death rate from all causes combined in the last quarter of 1957 was 16 percent above that in the corresponding period of 1956.

The flu outbreak was much more explosive and reached an earlier peak in the northern part of the United States than in the south or west, the report said. Other findings were:

Accurate forecasting of epidemic outbreaks of influenza is impossible, according to the researchers. However, they point out, it is exceptional for widespread outbreaks to occur in successive years.

Among children and young adults, the highest incidence occurred in the earlier weeks of the epidemic, while among middle-aged and older people, the outbreak reached its peak appreciably later and subsided more slowly.

The mortality was largely concentrated among the very young and the aged.

A large proportion of the deaths attributed to influenza occurred

(Continued on page 104)

Felicia Pietrantoni, multiple sclerosis victim, is pushed onto hydraulic tail gate of Ramsmobile. An unusual application of a parcel delivery truck, it is operated by Rochester (N.Y.) Area Multiple Sclerosis Chapter. Wheel-chair patients are transported from their homes or hospitals to clinics, rehabilitation centers, physicians, dentists, as well as to recreational centers, civic events, ball parks, and picnic groves. Anthony B. Heaney, executive director of the chapter, prepares to trip lever that will lift Miss Pietrantoni up to truck floor level. She will then be wheeled into the truck body and her chair fastened firmly to the floor behind the driver. Mr. Heaney's assistant, Mrs. Eleanor Genhart, guides the chair.

The truck holds seven wheel chairs and has side benches for additional passengers. It represents a great step in getting some of the 250 declared M.S. victims in the Rochester area out into active life, Mr. Heaney points out. Passenger cars and a rented bus were used previously.

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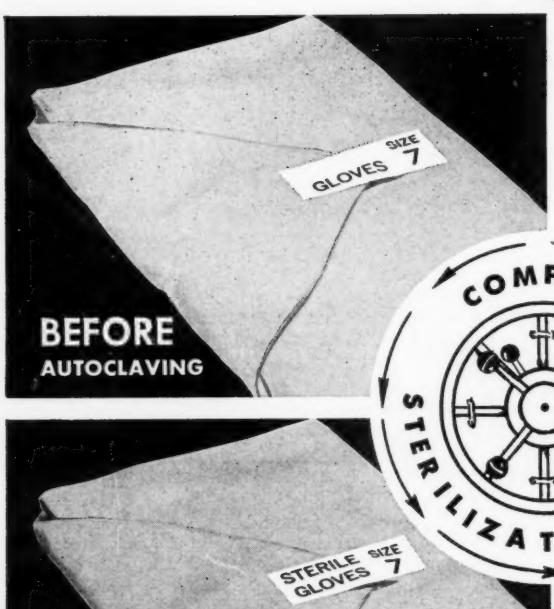

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News Briefs at Press Time

SUGGESTS CLOSING NEW JERSEY HOSPITAL NURSING SCHOOLS

Establishment of a governor's interim commission to study closing the 35 hospital schools of nursing in New Jersey and placing all nurse education in college programs has been urged by Dean Ella V. Stonsby of Rutgers University College of Nursing.

Speaking at a New Jersey League for Nursing meeting, Dean Stonsby said: "It is clear that responsibility for undergraduate nursing education is shifting. This is borne out by the slow but steady increase in the numbers of collegiate programs, and the equally slow but steady decline in hospital programs.

"The problem then is not so much that of planning for change as it is planning for the change which will bring the trend to the logical fulfillment of the objective of university responsibility for nursing education at all levels."

She recommended the interim commission "to insure orderly progression of the change," and said the commission should be composed of nurses representing education and service, headed by a nurse educator and advised by a committee of hospital administrators, legislators, and prominent citizens.

She listed seven major areas which she said the commission would need to consider: number of nursing schools needed in the state, closing schedule for the 35 hospital schools, relocation of hospital school faculties, establishment of statewide scholarship programs, establishment of statewide recruitment programs, ways of augmenting the presently available teaching staff, and possible development of hospital and public-health facilities as clinical teaching centers for college students.

NLN REFUSES AHA PROPOSAL FOR JOINT ACCREDITATION

National League for Nursing, meanwhile, has rejected AHA proposal that the NLN join AHA and AMA in establishing an independent joint commission for accreditation of hospital nursing schools.

Its board of directors reaffirmed its position that accreditation of hospital nursing programs is the responsibility of NLN.

Question of deferring the deadline date for provisional accreditation--presently December 31, 1959--was referred to NLN's executive committee on accreditation policies, to be reported back to the board at its February meeting.

MANY HEALTH BILLS LIKELY IN 85TH CONGRESS

The 86th Congress should see a lot of activity in proposed health legislation, in contrast to the 85th Congress.

The controversial Forand bill is expected to be reintroduced, although one source predicts that strong pressures for enactment will be delayed until election year 1960.

Among other issues certain to be considered are federal support of medical research abroad, contributory health insurance for federal employees, and government aid to medical and dental schools.

BRIEF BRIEFS

Albert H. Holland, Jr., M.D., has resigned as medical director of Food and Drug Administration. He will join New York medical advertising firm, Cortez F. Enloe, Inc. . . . New college housing loans for student nurse dormitory construction have been awarded to Petersburg (Va.) General Hospital ($350,000) and White Cross Hospital, Columbus, O. ($500,000). . . . Phase I Emergency Medical Treatment Unit, a 23-item packet, was demonstrated at the Pentagon in late December.

Gordon M. Marshall

Calendar of Meetings

JANUARY

4- 7 International College of Surgeons, Southeastern Regional Meeting, Miami, Fla.

5- 8 AHA Institute, Nursing Service Supervision, Willard Hotel, Washington, D.C.

19-22 AHA Institute, Nursing Inservice Programs, Hilton Hotel, San Antonio, Tex.

21 Comite des Hopitaux du Quebec, Montreal, Que., Canada

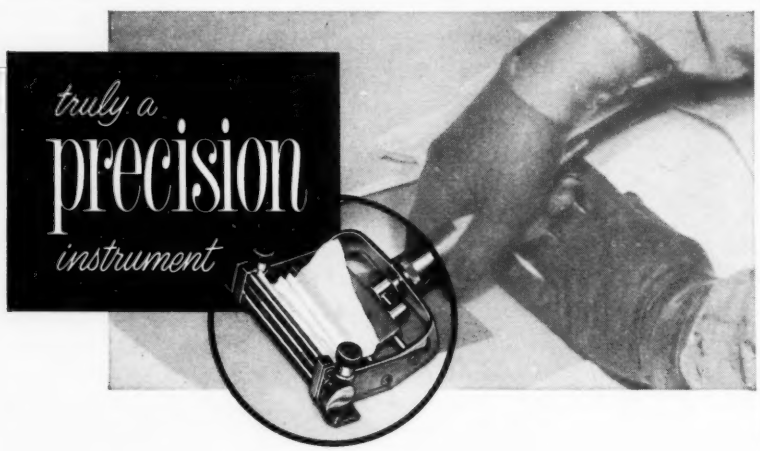
23-24 Alabama Hospital Association, Admiral Semmes Hotel, Mobile

24-29 American Academy of Orthopaedic Surgeons, Palmer House, Chicago

26-30 AHA Institute, Nurse Anesthetists, St. Francis Hotel, San Francisco

27-29 National Association of Methodist Hospitals and Homes, Jefferson Hotel, St. Louis

27-30 American Protestant Hospital Association, Jefferson Hotel, St. Louis



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FEBRUARY

4- 5 AHA Midyear Conference of Presidents and Secretaries, Palmer House, Chicago

4- 7 American College of Radiology, Chicago

5- 7 American College of Hospital Administrators, Annual Congress, Hotel Sherman, Chicago

9-12 Association of Operating Room Nurses, Shamrock-Hilton Hotel, Houston, Tex.

9-13 AHA Institute, Hospital Purchasing, Statler Hotel, New York City

19-21 Central Surgical Association, Montreal, Que., Canada

23-27 AHA Institute, Dietary Department Administration, YWCA, New Orleans

MARCH

2- 4 AHA Institute, Hospital Safety and Insurance, King Edward Hotel, Toronto, Ont., Canada

4- 6 Quebec Hospital Association, Windsor Hotel, Montreal, Canada

5- 6 Georgia Hospital Association, Bon Air Hotel, Augusta

5- 7 Louisiana Hospital Association, Bellemont Motor Hotel, Baton Rouge

9-11 Advanced AHA Institute for Directors of Hospital Volunteers, AHA headquarters, Chicago

9-12 Nurses-Surgeons Joint Meeting, American College of Surgeons, St. Louis

10-12 American Laryngological, Rhinological, and Otological Society, The Homestead, Hot Springs, Va.

12 Wisconsin Hospital Association, Hotel Schroeder, Milwaukee

17-19 National Health Council, Palmer House, Chicago

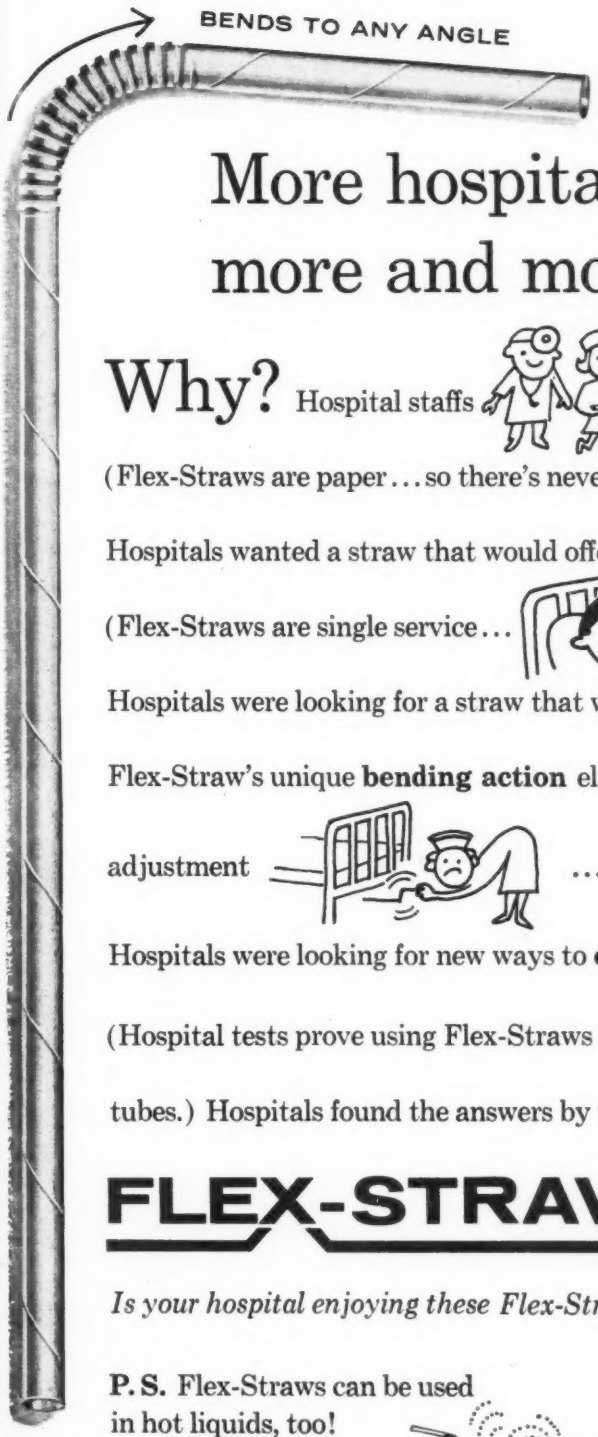
23-25 New England Hospital Assembly, Hotel Statler, Boston

30-April 1 American Orthopsychiatric Association, Sheraton Palace Hotel, San Francisco

30-April 1 Southwestern Surgical Congress, New Brown Palace Hotel, Denver

31-April 2 Kentucky Hospital Association, Phoenix Hotel, Lexington

(Continued on page 14)



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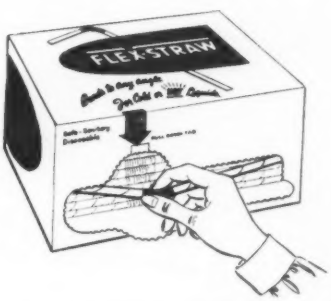

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CALENDAR OF MEETINGS

(Continued from page 10)

APRIL

1- 3 Mid-West Hospital Association, Municipal Auditorium, Kansas City, Mo.

5- 9 American College of Obstetricians and Gynecologists, Traymore Hotel, Atlantic City, N.J.

6- 8 American Radium Society, The Homestead, Hot Springs, Va.

6- 9 American Academy of General Practice, San Francisco

6- 9 Ohio Hospital Association, Veterans Administration Auditorium, Columbus

8-10 Southeastern Hospital Conference, Atlanta-Biltmore Hotel, Atlanta, Ga.

10-11 New Mexico Hospital Association, Hilton Hotel, Albuquerque

13-17 AHA Institute, Hospital Engineering, Lord Baltimore Hotel, Baltimore, Md.

15-17 American Surgical Association, Fairmont Hotel, San Francisco

16-17 Carolinas-Virginias Hospital Conference, Hotel Roanoke, Roanoke, Va.

17-19 Eastern Surgical Trade Exposition, New York Trade Show Building, New York City

20-23 AHA Institute, Evening and Night Nursing Administration, Lafayette Hotel, Buffalo, N.Y.

20-23 Congress of International Anesthesia Research Society, Miami Beach, Fla.

20-24 American College of Physicians, Conrad Hilton Hotel, Chicago

23-25 American Association of Pathologists and Bacteriologists, Somerset Hotel, Boston

23-25 National Association of Institutional Laundry Managers, Mayo Hotel, Tulsa, Okla.

27-29 Aero Medical Association, Hotel Statler, Los Angeles

27-29 Tri-State Hospital Assembly, Palmer House, Chicago

27-May 1 National Association for Practical Nurse Education, Netherland Hilton Hotel, Cincinnati, O.

28-May 1 AHA Institute, Occupational Therapists, Roosevelt Hotel, Waco, Tex.

30-May 3 Student American Medical Association, Morrison Hotel, Chicago

MAY

3- 4 American Society for Clinical Investigation, Haddon Hall, Atlantic City, N.J.

4- 7 Association of Western Hospitals, Hotel Utah, Salt Lake City

6- 8 American Pediatric Society, The Inn, Buck Hill Falls, Pa.

7- 8 Tennessee Hospital Association, Andrew Jackson Hotel, Nashville

10-15 Society of American Bacteriologists, Sheraton-Jefferson Hotel, St. Louis

11-13 Canadian Hospital Association, Queen Elizabeth Hotel, Montreal, Que., Canada

11-14 Texas Hospital Association, Shamrock-Hilton Hotel, Houston

11-15 National League for Nursing, Philadelphia

13-15 Upper Midwest Hospital Conference, St. Paul Auditorium, St. Paul, Minn.

14 Massachusetts Hospital Association, Hotel Statler, Boston

20 New Jersey Hospital Association, Convention Hall, Atlantic City, N.J.

(Continued on page 16)

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Germicidal Cleaner

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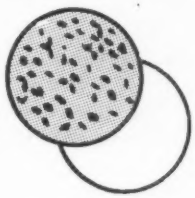
Kills Staph, other bacteria as it cleans your floors

Special Sample offer to accredited hospitals



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CALENDAR OF MEETINGS

(Continued from page 14)

MAY

20-22 Hospital Association of Pennsylvania, Convention Hall, Atlantic City, N.J.

20-22 Hospital Association of New York State, Convention Hall, Atlantic City, N.J.

20-22 Middle Atlantic Hospital Assembly, Convention Hall, Atlantic City, N.J.

24-29 National Tuberculosis Association, Palmer House, Chicago

25-27 American Gynecological Society, The Homestead, Hot Springs, Va.

26-29 American College of Cardiology, Benjamin Franklin Hotel, Philadelphia

28-30 American Ophthalmological Society, The Homestead, Hot Springs, Va.

JUNE

1- 4 American Dermatological Association, Claridge Hotel, Atlantic City, N.J.

1- 4 Catholic Hospital Association, Kiel Auditorium, St. Louis

1- 6 International Hospital Congress, Edinburgh, Scotland

4- 5 American Geriatrics Society, Hotel Traymore, Atlantic City, N.J.

4- 7 American Medical Women's Association, Sheraton Ritz Carlton Hotel, Atlantic City, N.J.

6- 7 American Diabetes Association, Chalfonte-Haddon Hall, Atlantic City, N.J.

15-17 American Neurological Association, Claridge Hotel, Atlantic City, N.J.

15-19 Medical Library Association, King Edward-Sheraton Hotel, Toronto, Ont., Canada

16-18 American Orthopedic Association, Lake Placid Club, Lake Placid, N.Y.

JULY

16-24 Canadian Medical Association, Edinburgh, Scotland

19-25 International Congress of Pediatrics, Montreal, Que., Canada

23-29 International Congress of Radiology, Munich, Germany

AUGUST

5-15 Second Annual Health Exposition, The Coliseum, New York City

24-27 American Hospital Association, The Coliseum, New York City

30-September 4 Second World Conference on Medical Education, Palmer House, Chicago

SEPTEMBER

6-12 World Congress for Physical Therapy, Paris, France

20-24 American Roentgen Ray Society, Cincinnati, O.

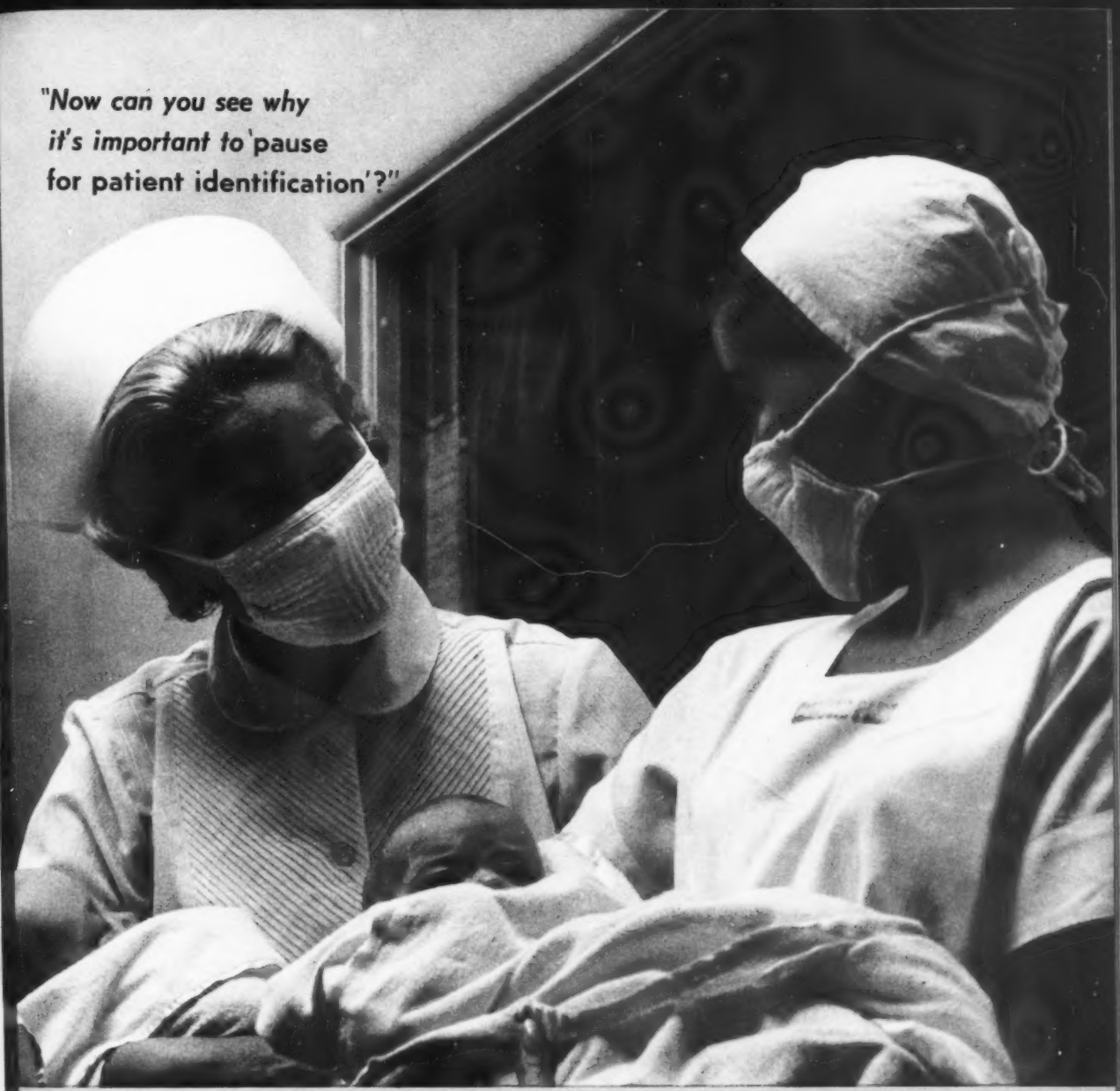
21-25 Annual Instrument-Automation Conference and Exhibit, International Amphitheatre, Chicago

OCTOBER

12-15 American Association of Medical Record Librarians, Annual Meeting, Radisson Hotel, Minneapolis

21-22 Washington State Hospital Association, Chinook Hotel, Yakima

26-28 Maryland-District of Columbia-Delaware Hospital Association, Hotel Shoreham, Washington, D.C.



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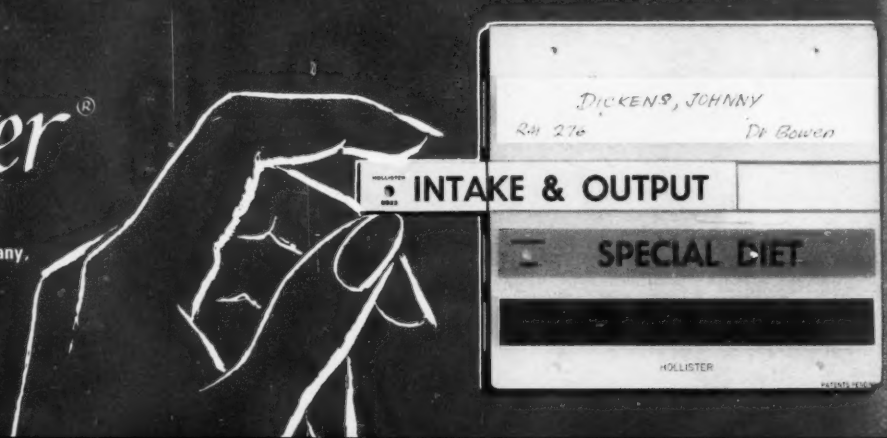

American Medical Association

12th Clinical Meeting • Minneapolis, Minn., December 2-5

• Adequate health care for the over-65 group was the goal of major action by the American Medical Association's House of Delegates at the 12th clinical meeting in Minneapolis in December.

Delegates adopted a report urging that "physicians everywhere expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income; that physicians agree to accept a level of compensation as full payment for medical service rendered to this group, which will permit the development of such insurance and prepayment plans at a reduced premium rate."

A Congress on Prepaid Health Insurance, to be sponsored by the Council on Medical Service "at the earliest practicable date," was authorized in another resolution approved. Purpose of the congress would be to formulate plans for "offering sound and constantly improving voluntary health insurance to the citizens of our nation."

Delegates also accepted a reference committee report noting that Blue Shield plans have a special committee studying seven distinct approaches to the problem of prepaid health insurance for elderly persons.

The delegates' action indicated that they apparently agreed with Minnesota Gov. Orville L. Freeman's statement that if they opposed the Forand bill, they had the responsibility of helping to work out an alternative program "to meet the need that we all know exists and becomes more serious every day."

The House recommended that Congress amend the Social Security Act to permit states to combine the present four public-assistance medical programs into one.

In other actions, the House:

—Deferred until the June, 1959, meeting action on the report of the Commission on Medical Care Plans.

—Disapproved a resolution to establish the sovereignty of relationships between medical societies and the osteopathic profession in their respective states.

—Recognized a resolution indicating that 45.7 percent of the members of the Ohio State Medical Association voted in a recent survey for inclusion of physicians in the federal social-security program. Delegates voted to send detailed results of the poll to members of the AMA board of trustees.

—Noted curtailment of the Medicare program and recommended that "the AMA encourage re-establishment of services under the free choice principle to accomplish the original intent of the Medicare Act."

Abstracts of selected papers from the scientific sessions follow.

Ureteral Colic

New Form of Oral Atropine Relieves Symptoms of Ureteral Colic

Symptoms of ureteral colic have been relieved in 47 of 50 patients treated with a new form of oral atropine.

The use of oral atropine tannate (Atratan) was of definite value in all situations in which urinary-tract symptoms resulted from spasm of smooth muscles. The drug may prove to have a great potential for out-patient treatment of persons with a smaller calculus, likely to pass spontaneously.

In the new compound, a new chemical process, designated as durabond, provides a constantly maintained release of the therapeutic agent, despite variations in gastrointestinal motility or pH.

Of 40 patients suffering from ureterolithiasis, 39 were benefited by the new drug. Oral atropine tannate was of distinct value in eight patients with ureteral colic from causes other than a stone.

Another advantage of the drug in the treatment of colic-like pain was that 35 of 40 patients required no administration of narcotics.

Four patients reported side-effects from the drug, but none of these was serious enough to warrant discontinuation of the medication. All side-effects were considerably less objectionable than those caused by narcotics, and they did not in any case interfere with ambulation.—*Miles W. Thomley, M.D., Louis M. Orr, M.D., James L. Campbell, M.D.,* and *James B. Jamison, M.D.,* Orlando, Fla.

Inflammation Relief

Proteases Aid Thrombophlebitis Victims; Also Prevent Swelling After Surgery

Proteases—enzymes that break down protein—are especially valuable in the treatment of thrombophlebitis. They relieve the inflammation and prevent fluid retention and swelling.

When a combination of streptokinase and streptodornase is given for three to four days, the usual pattern is a loss of pain, tenderness, and overlying redness and swelling within about 48 hours after

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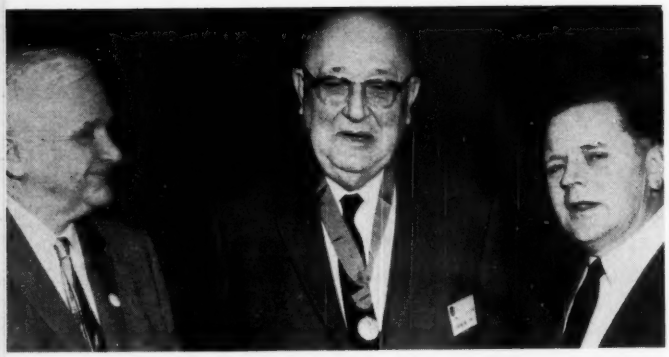

Lonnie A. Coffin, M.D. (center), Farmington, Ia., named "GP of the year," is congratulated by American Academy of General Practice officers Holland T. Jackson, M.D. (l.), Fort Worth, Tex., and Fount Richardson, M.D., Fayetteville, Ark.

AMA continued

beginning treatment. Walking is generally possible and is permitted in about 72 hours.

Proteases have also proved very useful in preventing swelling after surgical procedures. The reduced swelling and inflammation permits better closure of the incision, less scar formation, faster healing, and less pain and discomfort for the patient.

Among the many other conditions for which proteases are used are contact dermatitis, bronchial asthma, swelling around the eye from injury or infection, acute joint inflammations and sprains, abscesses, respiratory-tract infection, and acne vulgaris.

Proteases significantly modify the severity and shorten the duration of an inflammatory reaction, but they do not inhibit or suppress inflammation. Buccal administration produces fewer adverse side-effects than does intramuscular administration.—*Irving Innerfield, M.D.*, director, enzyme research laboratory, New York Medical College, New York City.

ECHO Viruses

Four Types of ECHO Viruses Linked to Aseptic Meningitis

At least four of the ECHO viruses—types 4, 6, 9, and 16—appear to be important causative agents in aseptic meningitis.

This disease has frequently been confused with nonparalytic poliomyelitis, and its symptoms generally include fever and headache.

At least 16 other distinct viruses have been identified and are included in the ECHO group.

The evidence linking the four types to aseptic meningitis has been found in studying localized outbreaks which occurred during the last several years.

ECHO virus 4 was first recognized as a causative agent in an outbreak in Marshalltown, Iowa, in 1955. The attack rate, based on a household survey, was 16 percent, and it was estimated that as many as 3,200 cases may have occurred in the town, which has a population of about 20,000. The virus was isolated from the stools of half the patients with aseptic meningitis and 20 percent of the patients with minor feverish illnesses.

ECHO virus type 6 was proved to have caused aseptic meningitis outbreaks in Massachusetts in 1954, and in New York and Connecticut in 1955.

ECHO virus type 9 was implicated in outbreaks occurring in several European countries during 1955 and 1956 and in Milwaukee during the summer of 1957. In the Milwaukee epidemic it is estimated that approximately 40,000 persons had the illness.

The infection is frequently accompanied by a rash which resembles that of German measles, especially in young children. However, there are certain distinguishing features. Lymph-node involvement, a common feature of German measles, rarely occurs in aseptic meningitis. Headache and fever are frequently observed among relatives of persons with aseptic meningitis, but not among the families of persons with German measles.

ECHO virus 16 infections also are frequently associated with skin rash.—*Tom D. Y. Chin, M.D.*, U.S. PHS Communicable Disease Center, Kansas City, Mo.

Head Injuries

Describes Types of Head Injuries Requiring Immediate Treatment

Damage to the brain and spinal cord causes 70 percent of the deaths resulting from automobile accidents. Furthermore, 70 percent of the deaths from head injuries take place in the first 24 hours after the accident.

Ideally, the head injury should be treated by a neurosurgeon, but, unfortunately, one is not always available.

There are three main types of head injuries—mild, overwhelming, and indecisive. Included in the mild type are lacerations of the scalp and concussion, which do not require much treatment or concern. Overwhelming injuries include crushing types of trauma, massive hemorrhage within the skull, and laceration of the midbrain or brain stem. Patients so injured rarely survive long enough to see a physician.

The third group of injuries can be effectively treated in many instances. Patients with these injuries usually will survive long enough to reach a neurosurgeon. However, there are at least two situations in which immediate attention is needed.

An infant who appears to be dying of intracranial bleeding needs immediate treatment. If the child is less than 18 months old, a needle can be inserted through the fontanel of the baby's head. This allows the blood to escape through the needle and reduce the pressure on the brain. The operation can be done once or twice daily if necessary until the bleeding stops.

The other acute emergency that must be recognized and treated at once is acute extradural hemorrhage. The classic example of this type of injury is in an adolescent who, while riding a bicycle, falls and strikes his head. He is momentarily dazed, but goes home. During the next hour, headache develops, he becomes generally ill and vomits, paralysis appears, and he becomes unconscious. At this stage, the situation is a dire emergency.

Surgical intervention is imperative. During the surgery, the damaged artery is repaired and blood clots removed. — *Collin S. MacCarty, M.D.*, Mayo Clinic, Rochester, Minn.

Asthma Relief

Epinephrine-Resistant Asthma Patients Respond to Sodium Lactate

Asthmatic patients who do not respond to standard treatment with epinephrine have obtained dramatic relief from intravenous injections of sodium lactate.

In a series of studies, aimed at finding some solution to the problem of the epinephrine-resistant patient, we found that epinephrine works best when the blood is more alkaline than acid. We therefore decided to try changing the blood acidity in these patients.

The sodium lactate solution was given to 45 patients. No other medication was given. The patients' blood immediately became more alkaline, and they obtained immediate relief from their asthmatic attacks. The results were apparently attributable to the increased effectiveness of the patients' own adrenin.

Response to the injections was at times so rapid and dramatic that it appeared that something more than just a change in the blood alkalinity was involved—perhaps a change in the acidity of the body tissues.

Sodium lactate is the method of choice in patients who do not react to epinephrine. However, it should not be given to persons in whom sodium retention would be dangerous—*J. S. Blumenthal, M.D.*, University of Minnesota Medical School, Minneapolis.

Feeding Prematures

Low-Water, High-Calorie Formula Promotes Prematures' Weight Gain

A formula low in water and high in calories causes a premature baby to grow as fast or even faster than he would have if he had been born at term.

In studying the use of water by the premature infant, it was found that increasing the water content of a standard milk formula caused a fall in weight gain in most premature infants. This probably occurred because the large volume of dilute milk that the infant was required to drink to secure his "usual" quota of calories exceeded his capacity.

It was decided, therefore, to use a concentrated form of low-solute-content milk. Surprisingly, many of the premature infants continued to take almost the same amount of formula they had consumed when they received the standard dilution of the same milk, even though the caloric content of the concentrated form was doubled.

The infants, therefore, received twice as much protein and calories as the infants who received the regular formula. Their weight gain and growth rate was greater than that usually seen in premature infants given breast milk or common formulas. In addition, it was usually similar to or above that which would have occurred if the infant had been born at term.

These infants regained their birth weight more rapidly and could sometimes be dischargd from the nursery many days or weeks earlier than would have been possible with a standard formula.—*Hans G. Keitel, M.D.*, professor of pediatrics, Jefferson Medical College, Philadelphia.

Parental Assault

Child with Multiple Injuries May Be Victim of Assault

A doctor who sees a child with many injuries should suspect assault by a parent or guardian as the cause.

Herman Kleinman, M.D., Minneapolis, received a warbonnet from grateful patients for his work on the Redlake Indian reservation. Admiring the finery at the exhibit on "Indian Medicine in Minnesota," are Mrs. Arnold Kremen (l.), Minneapolis, and Anita Lussier, Rochester, Minn.

In the ordinary fall from heights, such as from porches or windows, the fracture is usually on one side and is of the crushing type. The usual fall from a chair, hobby horse, or bicycle results in a single fracture. In assault cases, however, fractures when present on examination are always multiple: fractures of the long bones of the arms or legs or of several ribs and very likely in association with a skull fracture. And they are almost always accompanied by bruises of the soft tissues . . . and

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at times by burns and internal injuries, probably from kicks.

When these children are hospitalized, they gain weight rapidly because they eat ravenously, evidencing previous neglect as the cause of malnourishment and nutritional anemia which are almost always associated conditions.

Formerly multiple injuries were presumed to be the result of scurvy, rickets, or syphilis, now rare diseases in children, or perhaps of certain blood disorders in which the bones undergo changes and the skin may appear bruised and hemorrhagic as it does in the cases of assault.

Howard M. Frykman, M.D. (l.), Minneapolis, listens as R. K. Ausman, M.D., and Sharon Semmill, M.T., explain material in scientific exhibit on isolated organ perfusion.

However, these conditions may be ruled out and a great deal of time and money saved if the examiner is aware of the likelihood of parental assault.

The physician's responsibility cannot end with the treatment of such injuries. Reports on such injured children who are admitted to Cook County Hospital, Chicago, are turned over to the family court. In most instances the Juvenile Protective Association of Chicago assumes responsibility for evaluation and disposition of the child to a supervised foster home.—*Donald S. Miller, M.D.*, professor of orthopedic surgery, Chicago Medical School.

Surgery in Newborn

Infant in First 72 Hours of Life Can Withstand Surgery Well

If a newborn baby needs surgery, one of the best times to perform it is during the first 72 hours of life. The newborn infant then is in an excellent nutritional state, with high levels of hormones and inherited antibodies circulating in the blood. These enable him to adapt to stress and to thwart infection.

Moreover, the newborn possesses a high threshold of pain and requires smaller amounts of anesthetic agents. The infant will tolerate major surgery extremely well and will recover rapidly.

After the first 72 hours there should be a temporary discontinuance of surgical intervention. For the next 11 days the infant is in a period of transition. He is losing weight and has a sluggish adrenal response. He again becomes a good surgical risk after he is two weeks old.—*H. William Clatworthy, Jr., M.D.*, associate professor of surgery, Ohio State University College of Medicine, Columbus.

Restrictions on Cardiacs

Suggests Revisions in Classifications For Work by Cardiac Patients

Present activity limitations set on cardiac patients by the classification charts may be too low. The classifications are based on the amount of energy needed in the continuous performance of various activities, such as walking, standing, ironing, and typing. However, most domestic, recreational, and industrial activities are intermittent in nature, with short bursts of high-energy output followed by pauses.

Because it has been found that cardiac patients can safely perform intermittent work in which they expend amounts of energy much higher than those listed in the classification charts, we believe that the charts should be revised so that the limits of activity are based on energy output for intermittent work.

The revised classification would take into account the fact that many cardiac patients can perform levels of work consistent with usual work performed by the able-bodied.

The revision might make the term "light work" disappear from the lexicon of cardiac rehabilitation, and in so doing improve the chances of rehabilitation for many persons. The emotional impact of work restriction often retards a cardiac patient's rehabilitation.

Many physicians, in writing a "work prescription," wish to play it safe and underestimate a patient's capacity to undertake even ordinary activity. The yardstick of energy cost, however, allows a physician to gain some idea of the effort needed for work and play. By watching a patient in the daily chores of known energy cost and noting his response to them, the physician can determine whether the patient needs restriction.

The concept of energy cost of effort is less spectacular than cardiac surgery or drug treatment, but it is of far greater significance.—*Edward E. Gordon, M.D.*, director of physical medicine, Michael Reese Hospital, and associate professor of clinical physical medicine and rehabilitation, University of Illinois College of Medicine, Chicago.

Association of Military Surgeons--
Washington, D. C., November 17-19

Cooperation Essential

Science and Medical News Should Be Readily Transmitted to Public

An informed public is better able to protect its health; moreover, as it becomes familiar with research developments, an informed public is more likely to give research the needed financial support.

As a group, doctors and researchers transmit much information to the public through the press. But there are too many individuals who still feel that there is no value in giving the public a lot of medical information; who believe the public should get only that information involved in personal treatment; who believe that the press can't get anything straight.

It should be remembered, when the press is charged with publishing a premature announcement or claim, that the press is quoting a doctor. Reporters don't work in laboratories; they are not always qualified to weigh a doctor's statement as to its validity. However, if a wire service or newspaper actually quotes a source incorrectly, it deserves criticism. And, these days, it gets it; the National Association of Science Writers is an organization dedicated to promoting the accurate reporting of science and medical news, and it keeps a critical watch.

Newspapers have an obligation to train more men in science and medical writing; doctors have an obligation to cooperate by trying to put their language in a reporter's realm of understanding.

Science reporters are writing for the general public, not for scientists, so doctors should understand that the news story cannot employ the same technical details of presentation that a technical journal can. Above all, they should realize that advances in medicine are news and news should not be kept from the public.—*Frank Carey,* Science writer, Associated Press, Washington, D.C.

Soon a Reality

Must Consider Physiological, Psychological Needs of Man in Space Flights

When we send man into space, we will find thrust upon us the problems of providing a safe, healthful, acceptable environment predicated upon the requirements of man and his accustomed way of life.

Furthermore, environment, workspace, and sustenance must be so suitable that man can carry out his mission with efficiency and have no irreversible body changes occur during his period of travel or extraterrestrial habitation.

Food, water, and oxygen supplies will have to be both adequate and appropriate. Foods of low residue, which will form a minimum of intestinal gases, will have to be selected. They will have to be of high acceptability, processed and packaged in a form that minimizes weight and gives consideration to consumption under conditions of weightlessness. Provisions will also have to be supplied for the collection of urine and fecal materials.

Pictured at right is Brigadier General Harold H. Twitchell, USAF, new president of the association. General Twitchell is command surgeon of the United States Air Forces in Europe at Weisbaden, Germany.

Oxygen will have to be supplied to the cabin or to the man directly at a partial pressure of not less than 150 mm. Hg. Research has shown that the concentration of carbon dioxide will have to be kept below 1 percent and the humidity at 20-50 percent. Temperatures of the ambient air should be maintained at 50-80 degrees Fahrenheit, although allowances may be required for higher temperatures for short periods of time during re-entry.

Besides affecting the physiological requirements of man, tests have shown that space travel will make exacting demands on his psychological processes in such areas as isolation and confinement, reduced sensory environment, weightlessness, forced association, workspace layout, and presentation of information. Individuals, too, will vary in their ability to accept separation from their accustomed environment.

Further study to determine their significance as occupational health hazards is needed on radiation, toxic chemicals and odors, noise and vibration, acceleration, natural infection, and disorientation.

Collection of data from presently orbiting satellites indicates that space ambient radiations may not be a limiting factor below 600 miles, for space flights of short duration. Health hazards from exposure to chemical materials in the space cabin appear to be minimal. In a closed circuit system, removal of certain gaseous chemicals may be required.

Measurements of sound intensities in nose cones of ballistic missiles indicate a possible requirement

(Continued on next page)

for protective noise equipment. It has been reported that the noise level of a rocket launch may be as high as 120-140 decibels.

The scope of vibration during launch or re-entry is still not clearly defined. However, preliminary vertical accelerator studies are indicating that no critical vibration problem exists.—*George Kitzes, Ph.D.*, Physiology Branch, Aero Medical Laboratory, Wright Air Development Center.

Principles for Discipline

Supply Service Needs Cooperation, Coordination, and Consideration

Service is the primary function of the supply department of a military hospital. It functions for the professional departments, the ancillary functions, and the military missions and military preparedness of the hospital.

Three basic principles will lead to good supply discipline in medical supply. These are the three "c's": cooperation, coordination, and consideration.

Cooperation means the will to cooperate. Unless those who have the responsibility for supply join wholeheartedly in collective action for the mutual benefit, cooperation cannot be manifest.

Coordination means functioning harmoniously, or without open criticism from others. Service personnel must be prepared to meet demands placed by all customers, and to do this, there must be free, voluntary, and timely communication from all departments of the hospital to the supply service.

Consideration means appreciating and understanding the other fellow's problems so that a good supply service can be provided. In return, others must apply an appreciative attitude to supply problems and accord the service a respected position.

More and more pressure is being felt to effect economy in dollars and manpower. We must be on the alert not to reduce the quality levels of service below an acceptable minimum. We must keep abreast of the modern methods and applications at hand; we must never lose sight of the basic mission of supply—military preparedness.—*Lt. Commander Lester K. Thompson*, MSC, U.S. Navy, executive assistant to assistant chief of bureau for planning and logistics, Bureau of Medicine and Surgery, U.S. Navy, Washington, D.C.

Old Needs, New Terms

Medical Research Needs Ideas, Personnel, and Facilities to Advance

Ideas, personnel, and facilities are the future needs of medical research. Although these needs themselves are not new, the new things about them can be expressed in terms of size, extent, and time.

Time is important. Medical research institutions urgently need trained personnel to pursue the ideas already waiting for fruitful research. We should make long-range plans, but we must start implementing them now.

The extent of our needs is world wide in scope, constantly growing, and immediately pressing. Many countries look to the United States, where research personnel and facilities have been increasing, as a training ground.

Moreover, our own population increase suggests the size of future U.S. needs in medical research, for 205 million are expected by 1970. Since one-quarter of those will be over 50, we shall have no lessening of people stricken by the still-unconquered diseases most frequent in middle and later life.

What should we do? We must increase research facilities, trained personnel, and teachers as rapidly as possible. Research, too, is becoming multidisciplinary, and collaborative research is seen as increasingly necessary. Along with this goes the discovery and development of future researchers, and the problem of where best to seek support for research. These problems must be solved in the near future if medical research is to march forward to greater accomplishments.—*Captain O. D. Yarbrough*, MC, U.S. Navy.

Awards Presented to Outstanding Surgeons at Recent Meeting

During the recent military surgeons' convention, awards were presented to several members for outstanding contributions to the field of medicine. The awards and their recipients are these:

Founder's Medal—*W. Edward Chamberlain, M.D.*, special assistant for atomic medicine to the chief medical director, and associate director of research, Veterans Administration, Washington, D.C.; *A. B. C. Knudson, M.D.*, director, Physical Medicine and Rehabilitation Services, Veterans Administration, Washington, D.C.; *Byron J. Olson*, chief, Epidemiology and Immunization Branch of the Foreign Quarantine Division, USPHS, Washington, D.C.; *Colonel George B. Green*, USAF (MC), chief, medical team, Office of the Assistant Air Force Chief of Staff for Intelligence, Washington, D.C.

Gorgas Medal—*Lt. Commander John H. Ebersole*, USN (MC).

Sir Henry Wellcome Medal and Prize—*Lt. Colonel Carl W. Hughes*, USA (MC).

Honorable Mention Award for the Sir Henry Wellcome Medal—*C. Davis Belcher, M.D.*, assistant chief of surgery, Veterans Administration Hospital, Wilmington, Delaware.

Stitt Award—*Capt. George L. Calvy*, USN (MC), chief of medicine, Naval Hospital, St. Albans, N.Y.

McLester Award—*Colonel William H. Lawton*, USAF (MC), consultant, Flight Safety Foundation, New York. Awarded posthumously.

Major Louis Livingston Seaman Prize—*Colonel Rollin L. Bauchspies*, USA (MC), commander, U.S. Army Hospital, Neubrucke/Nahe, Germany.

Inhalation Therapists Convention--

St. Louis, November 10-14

• The 4th annual meeting of the American Association of Inhalation Therapists drew 120 association members, 64 representatives of 21 exhibiting companies, and 20 representatives of service companies. The latter were an integral part of the convention, entering into panel discussions in a liaison capacity to discuss specialized services available, and the development of new equipment.

Panel discussions were featured on two days. Robert B. Dodd, M.D., head of the division of anesthesiology, Washington University School of Medicine, St. Louis, Mo., headed the panel on gas mixtures, and discussed the use of 100 percent oxygen. Albert H. Andrews, M.D., director of the respiratory laboratory, Presbyterian-St. Luke's Hospital, Chicago, spoke on air-oxygen mixtures; Albert Roos, M.D., chief of laboratory of thoracic physiology, Washington University School of Medicine, spoke on CO_2-oxygen mixtures; and William F. Miller, M.D., director, pulmonary division, University of Texas Southwestern Medical School, Dallas, discussed helium-oxygen mixtures.

The panel on *Education and Schools for Therapists,* was moderated by Constance T. Cypert, supervisor of inhalation therapy, Inter-Community Hospital, Covina, Calif., who has set up a 24-month course at Mount San Antonio College which will give its graduates an associate in arts degree and a certificate enabling them to work on a supervisory level.

John Hinman, M.D., assistant secretary, council on medical education and hospitals, American Medical Association, Chicago, gave a *Report on Standards of Education and Training and Establishment of Schools.* He described the proposed essentials for acceptable schools of inhalation therapy which would be used as a guide, and the voluntary registry for inhalation therapists.

Roy H. Behnke, associate professor of medicine, Indiana University Medical Center, Indianapolis, spoke on *Breathing Exercises for Chronic Respiratory Cases.* He expressed the opinion that abdominal belts are usually effective only after the patient has learned to do exercises, which the belts then help reinforce.

VIP's at the AAIT convention, left to right, Don E. Gilbert, president; James E. Peo, R.N., immediate past president; Larry Fruik, first vice-president; Leah Tharaldson, R.N., board member; Sister M. Yvonne, board chairman; and Agnes Forrest, treasurer.

Herbert C. Sweet, M.D., director, pulmonary laboratory, St. Louis University, took as his subject *IPPB Therapy in Emphysema.* He reviewed a study of 50 patients using IPPB in their homes over a period of one to four years. Functional studies made before and at intervals during this time showed definite improvement in a few, but the majority remained the same. The important point, however, was that the amount of time necessary for these patients to spend in the hospital has been much less since IPPB has been instituted in the home.

A first-time subject at the meeting was *Legal Problems of Inhalation Therapists.* William E. Hartnett, of Riordan & Brown, Chicago attorneys, said that now that therapists have achieved professional status they can be subject to malpractice and negligence suits the same as doctors and nurses. He stressed that rigid adherence to ethical standards, and conscientious attention to advances in the field, are basic musts as a measure of security against legal involvement.

A highlight of the convention was the charter presentation to the Southern California group, making it the fifteenth chapter. Over 20 applications for individual membership in the association were also approved.

Chapter delegates attending were, seated: Walter Palmer, William Miliken, and J. Addison Young; standing: Earl Hockman, B. J. McCluskey, Ben Rosa, Leonard Gurney, and Jerome Heydenberk.

American Heart Association--

San Francisco, October 24-28

• Approximately 3,000 physicians, research scientists, and lay leaders gathered at the Civic Auditorium in San Francisco recently for the American Heart Association's annual meeting and scientific sessions. The convention marked the tenth anniversary of the association as a national, voluntary agency. Francis L. Chamberlain, M.D., associate clinical professor of medicine, University of California School of Medicine, San Francisco, was installed as president.

Use Hydraulic Principles

Foresee Reconstruction of Deformed Vessels, Valves

There are indications that the growth of intra-arterial structures can be produced and molded by the utilization of hydraulic principles. These principles may one day be harnessed to accomplish the plastic reconstruction of deformed vessels and valves.

In recent experiments, bridges and flaps of tissue were grown inside the arteries of animals. Steel wire sutures or lengths of steel wire which were placed there to initiate growth became covered with a thin layer of tissue in three weeks. This new tissue continued to thicken, or remained thin, according to varying amounts of force exerted upon it by the bloodstream.

Tissue built up on the face of a vessel in the direction of the heart remained thin for as long as six months; new tissue located in a downstream direction from the heart, or to one side, continued to grow. In three months, it had grown to such a size as to nearly obstruct the artery.

These modifications came from the varying pressures and velocities to which the different parts of the blood-vessel network were subject. High pressures on the "heartward" face of a vessel compressed the new tissue and curtailed its growth; elsewhere, pressure combined with high velocity allowed the cells to keep growing even to the point where they almost closed the vessel.—*Simon Rodbard, M.D.*, University of Buffalo School of Medicine, Buffalo, N.Y.

Dr. E. Cowles Andrus (right), Baltimore, and Jack Benny (center) receive awards from Dr. Robert W. Wilkins, Boston, association president. Dr. Andrus won the Gold Heart Award, highest honor of the association. Mr. Benny received the "Heart and Torch" award for outstanding service in the fight against heart disease.

Too Much to Handle

How Emotional Upsets Harm Patients with Heart Disease

Emotional upsets may cause increased pressure in the large veins and aggravate the already decreased ability of the heart to circulate blood. In this way, heart failure may result.

Disturbing emotions push an increased amount of blood back to the heart by raising the pressure and tension in the small veins at the farther reaches of the circulation. In healthy people, this effect of emotional stress serves a useful purpose by making more blood available to the heart and enabling it to respond to a stressful situation.

However, if a person's heart is damaged, such an increased return of blood may prove too much for it to handle, thus hastening the onset of heart failure symptoms.—*Kerr L. White, M.D., Dan A. Martin, M.D., Charles R. Vernon, M.D., David H. Jones, M.D.*, University of North Carolina School of Medicine, Chapel Hill, N.C.

Restores Normal Heart Beat

Open-Heart Surgery Technic Used to Treat Heart Block

A technic for restoring the normal heart beat if it falters, originally developed for use in open-heart surgery, is now being applied without opening the chest.

The technic involves introducing a fine wire directly onto the surface of the heart muscle to overcome the "heart block"—an interruption in the pathways that conduct the electrical impulse triggering the heart beat from the heart's upper collecting chambers to its lower pumping chambers. It may occur in patients undergoing surgical repair on the interior wall separating the heart chambers, or in patients with heart disease who are not undergoing surgery.

In surgical patients, the wire is attached to a surgical needle and passed through the heart muscle, where it is held in place by silk sutures. One end of the wire is connected to a small electrical wave generator outside the body; the circuit is completed by another wire connected to a small plate electrode under the skin in the chest wall. Mild stimulation can then be given to restore the heart beat if it becomes disrupted, with the electrical current carried by the wire acting as a substitute for the heart's own pacemaker.

In nonsurgical patients, a long hollow needle is passed through the chest and brought to the heart wall. The wire is threaded through the hollow needle, pushed into the heart muscle, and connected up as in the surgical patients.

Use of this technic has brought about a remarkable reduction in death from heart block, and has been the most important contribution to the rapidly decreasing mortality of open-heart surgery.—*Paul C. Hodges, M.D., Earl E. Bakken, M.D.,* and *C. W. Lillehei, M.D.,* Minneapolis, Minn.

Two-Cusped Structure

Plastic Remodeling Technic Rebuilds Aortic Valve, Overcomes Leakage

The aortic valve, which controls the outflow of blood from the heart to the general circulation, can be rebuilt by a plastic remodeling technic which eliminates valve leakage.

The operation transforms the valve, normally a three-cusped structure, into a two-cusped structure. Various remodeling methods are used to adapt the general principle to the particular valve damage seen in each case.

Aortic valve leakage may be of congenital origin or may be a complication of rheumatic heart disease. During diastole of a normal heart, the three cusps fill with blood and come together, completely blocking any backward flow of blood into the heart from the aorta. During systole, they become flattened against the wall of the aorta, providing a passageway of large size. If any one of the three cusps become distorted, shrunken, or flabby, it is not capable of meeting with the other two, and leakage occurs.

Since the three-cusped structure is almost impossible to duplicate, the bicuspid valve structure is the next best thing. It presents only one line of closure along which the cusps have to meet, and they will close if there is only slight pressure from a backward surge of blood.

Among the methods used to remodel the valve have been the stitching together of two cusps, lifting flaps of tissue from the lining of the aorta and joining them to the free edges of deformed cusps, and removal of a cusp along with a part of the aortic lining.—*Charles P. Bailey, M.D.,* Philadelphia.

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Illinois Hospital Association--

Springfield, December 4-5

• *The 36th annual meeting and state convention of the Illinois Hospital Association, held in Springfield, was attended by nearly 300 hospital representatives, educational, social, and welfare workers in the fields of geriatric and psychiatric care, doctors and nurses.*

The theme of the two-day conference was "Adapting our services to changing needs"—more specifically to the needs of the aged and the mentally ill. HOSPITAL TOPICS presents abstracts from the panel discussions on these two vital subjects.

Official greetings! Virgil W. Nelson, left, secretary-treasurer of the Illinois Hospital Association; Ray E. Brown, president-elect; and Delbert L. Price, first vice-president.

Emil O. Stahlhut, moderator of the panel on the aging population, introduces its first speaker, Edna E. Nicholson, consulting director, Central Services for the Chronically Ill.

Age or Illness

Ailments of Over-65 Not Necessarily the Result of Aging

One of our most vital problems is how to adjust to the number of older people in our hospitals.

As acute illness is conquered, chronic illness becomes the dominant cause of 75 percent of all deaths. Nor are all these people aged; more children are dying from cancer than from all communicable diseases put together. The difference is that the aged have no one at home to care for them. In a survey in a neighboring state, 40 percent of the aged patients had no relatives at all.

In lumping the health and medical care of these people into the "aged" category, we make a serious mistake. Age alone does not make one sick; the aged run almost the entire gamut of ordinary ailments, just like younger people, and they need x-ray, surgery, and other medical attention on the same basis as other members of the community.

From 80 to 90 percent of our over-65 population are perfectly self-sufficient. Only 10 to 15 percent need long-term care. In Illinois, where we have 125,000 persons over 65, from one-half to two-thirds are at home—where they want to be, and can be. Regardless of increased facilities, one-half will continue to remain at home.

There should be no special hospitals for the over-age category; good medical care is too complex, too expensive, for separation and duplication. But we must expand our facilities; more attention must be given to the medical, physical, and other needs of the aged.

Every general hospital should have facilities for long-term care. Some patients, such as those with terminal cancer, need an enormous amount of care, and it might be a good idea to keep them with general surgery. If they are kept separately, we run into the difficulty of moving them—often long distances—which may be protested by the attending physician and the family.

We are, of course, always right up against financial problems, ranging from buildings to beds, and we bog down in the face of these problems. But it would be fatal to cut the garment to fit the cost. We must give good care first, then go out and get the money. It will take a lot of courage, a lot of vision, but it can be done.—*Edna E. Nicholson,* executive director, Institute of Medicine of Chicago; consulting director, Chicago's Central Service for the Chronically Ill.

The summing up. Harry Wright, Woodward Memorial Hospital, Sandwich; Florence L. Baltz and her husband, discuss the findings of the panel on the aging population, of which Mrs. Baltz was a member.

Custody or Rehabilitation?

Returning Patient to Own Home Not as Costly as Long-Term Care

In five years of working with public aid personnel in 102 counties, the pattern of health care for the aged has emerged consistently as a most crucial problem. Three or four years ago, we obtained permission from the Illinois State Advisory Commission on Aging to try an experiment in our method of spending money.

The two-year experiment covered two counties. In them, we screened old age assistance patients, selected those who seemed capable of being rehabilitated. For these, we paid for anything and everything the examining physicians recommended, from physical therapy to dentures.

At the end of two years, 100 old persons had returned home. The cost averaged $1,000 per patient; it was equivalent to only 12 to 14 months' stay in a nursing home.

We are considering extending this type of care to all over-age persons. This would mean, of course, a substantial shift in the way we spend our money. But perhaps we won't need all the beds we think we do if we set ourselves to a dynamic, rather than a destructive, approach; and perhaps we can, by example, strengthen the concept of rehabilitation in the general hospital.

Another phase of our thinking that seems to need adjustment is our tendency to consider all aged as potential long-term patients. There is a group, of course, which dies very quickly after admission to a nursing home; another which stays on for a long time. It is the in-between group, which averages only 50 to 60 days of care, which we have neglected to rehabilitate.

Two years ago we established teams of nurses and occupational and physical therapists to go into nursing homes and establish activities programs. Where these have been introduced, nursing care has been reduced by two-and-one-half hours—which financed the cost of the program.—*Elizabeth Breckenridge,* supervisor, Services for Aging, Illinois Public Aid Commission.

Hospital and Nursing Home

Hospital Can Fill Real Need As Consultant to Nursing Home

Today there are 25,000 nursing homes with 450,000 beds in the U.S. If the population increases to the expected figure, the number of beds will need to be doubled by 1975.

If, in this process of growth, the hospital will serve as a consultant or referral agency, it will

Above, l., Joseph A. George, administrator, Evangelical Hospital, Chicago, who has been with the hospital 40 years, and Charles A. Lindquist, r., who has just completed over 38 years as administrator of Sherman Hospital, Elgin, talk over old times with Harold L. Gano, administrator, Carmi Township Hospital. Right, Frank Rizzie, member of the board, and Mrs. Rizzie, Lucky Yaornik, bookkeeper, and Norma Hilt, administrator, all of Community Memorial Hospital, Staunton; and Kathryn E. Hepler, University of Illinois Hospitals, Chicago.

Members of the panel on the mentally ill, l. to r., front row: Delbert L. Price, administrator, Children's Memorial Hospital; Rev. John Weishar, Director of Catholic Hospital, Diocese of Peoria; Leon C. Pullen, Jr., administrator, Decatur and Macon County Hospital; back row: Charles O'Brien, legal counsel, IHA; Robert Evans, executive director, Blue Cross; John Kelly, Washington Service Bureau, AMA; and William J. Mueller, Arthur Anderson & Co. Ray E. Brown, administrator, superintendent, University of Chicago Clinics, not shown, was also a speaker.

diminish waste of time and high costs by placing the patient in facilities appropriate to his needs. It will alleviate shortage of beds in hospitals by assuring the physician and family that the patient will get continued nursing care in a homelike atmosphere.

One of the most acute problems in the relationship of hospital and nursing home is the lack of communications between the two. Hospital administrators and medical social workers should visit the nursing homes in their communities so they will be familiar with the function of the home, and the type of patient admitted. As the social worker understands the requirements of the aged and long-term patient, he will be most helpful to the physician, hospital, and family in proper placement.

Another problem is staffing. Hospitals can assist in this area by offering refresher courses to the retired nurse who can work several days a week, and is especially interested in a situation where the turnover is low, and there are comparatively few changes in orders.

Several nursing homes have established a close working relationship with their local hospitals to the extent they have borrowed life-saving equipment in an emergency. Sterilization of supplies has also been mentioned. There is an agreed fee for these services, as there should be.

The exchange of patient information between hospital and nursing home is highly important. The patient's history, diagnosis, treatment, medication, capabilities of self care, idiosyncrasies, family problems, if any, should go to the hospital with the patient. When he returns to the nursing home, a resume of the laboratory, x-ray, and diagnostic findings should go along.—*Florence L. Baltz*, president, American Nursing Home Association; chairman, Joint Council for the Health of the Aged.

The Man and the Physician

Doctor Must be Human Being As Well as Healer to Aged Patient

The staff physician can play a very constructive role in any hospital program or function concerned with the care of the aged. He can familiarize himself with facilities outside the hospital, to determine if a patient can be cared for in less expensive, i.e., home programs.

He can do much to change his own attitude, and that of nurses. The doctor who strides up to an elderly patient, beams, and says "Hello, Grandma," before making a quick getaway is, we hope, a vanishing American. Through hospitals and clinics, he can indoctrinate students, registered nurses, and practical nurses in the proper approaches to the aged patient.

He can serve as liaison between the patient or his family, and the hospital, to clarify and ease programs on both sides. And, certainly, he can encourage his patients to get health insurance while still below the 65-year limit.

When the need arises, it is the responsibility of the physician to carry his patient along to the nursing home by consenting to have all records from the hospital transferred (this is one of the major criticisms by nursing homes in admitting new patients). And, busy or no, it is the professional and human obligation of the attending physician to visit his patient at the nursing home instead of allowing him to become lost in his new environment.—*Edward M. Cannady, M.D.*, chairman, Committee on Aging, Illinois State Medical Society.

Community Awakened

Psychiatric Unit in General Hospital Removes Stigma of Mental Illness

Though mental illness is one of our major health problems, less than six percent of our general hospitals maintain a full, or even a partial, psychiatric service.

The advantages of such a service are many. The patient can be kept near his own home, in a place easily accessible—and emotionally acceptable—to visitors. There are a few patients who do better isolated from their normal environment, but these are in the very small minority.

In a local hospital, the patient can have a continuity of contact with his personal physician, family, friends, and religious counsellor, all highly important factors in his recovery. Also on the credit side of the ledger, an inpatient unit affords a unique opportunity for the staff to learn about psychiatric medicine, and thus gain a different attitude toward the mentally ill.

Situated in the center of the community, a hospital unit will encourage the community to participate more fully in mental health programs. As they observe treatment, and result, the morbid fear of mental illness tends to dissipate itself.

Mentally ill patients are not handled well on the general medical ward. Nurses are too busy, and often are not fitted by temperament to work effectively within this environment. They become anxious, and this anxiety is transferred to the patient who, with nothing to do with his time, is highly susceptible.

There are two constructive trends in the care of the mentally ill. One is toward day treatment, which is a financial boon to hospitals. The other is overnight care for the patient who works during the day. This has been an intermediate step in state hospital care for a long time, is now becoming accepted in the general hospital. Its rewards are twofold: the patient strengthens his contact with the outside world, has the good therapy of earning his own living, and the community is impressed that its own hospital can care for these highly specialized needs.

The disadvantages, too, must be mentioned, especially since most of them are misconceptions. The occasional legal problems that beset administration are so few they are the exception to the rule. The notion that a psychiatric unit is a financial burden is a reversal of fact. Such units not only pay for themselves, but for a very adequate staff as well. The threat to other patients, too, is generally unfounded. Only the terrifically disturbed patient is violent, and he can be brought under control.

Some doctors share the medieval notion that the mentally ill are not really sick, hence should not occupy beds. This type of thinking must be hit at the professional level; administration and staff must recognize that though therapy in this field differs from other disciplines, it is based on proven knowledge.—*Paul E. Nielson, M.D., Ph.D.*, associate professor of psychiatry, University of Chicago, Champaign, Ill.

Communications the Nerve Center

Coordination of All Types of Programs Will Help Rehabilitate Mentally Ill

There exists a very urgent need for better communication and coordination between the general hospital, nursing home, and state hospital in the care of the mentally ill.

About 70 percent of the patients in general hospitals have some emotional overlay to their illness. Yet if the attending physician so much as mentions it, the solution seems to be to immediately ship the patient to the state hospital—where he doesn't always belong.

To correct this impasse, a general practitioner should discuss his patient fully with the hospital, or outside psychiatrist. When special hospitalization is agreed upon, it should be handled intelligently and honestly; and the state hospital should receive all the available data along with the patient. But, the best solution is a psychiatric unit in the general hospital, which would cement relationships between the state and general hospitals, and help define the goals and limitations of each.

Very often the vital early treatment of the mentally ill is bypassed because the family refuses to put the patient in a state hospital. And, frankly, patients do regress in mental hospitals over a long period; many don't want to return home because they have lost their personal dignity, been forgotten by their families and friends. A recent survey in our state hospital revealed that 2,000 of our 2,500 patients had not had a single visitor for a full year. Put the psychiatric unit in the general hospital, and the majority of these people will have visitors.—*Ernest S. Klein*, superintendent, Peoria State Hospital.

Hospital's Finest Contribution

Psychiatric Unit Opens New World To Patient, Hospital, and Staff

The psychiatric unit at Methodist Hospital was established five years ago. We were beset by a number of obstacles: cross purposes in planning; fear on the part of the nursing staff, covered—thinly—by a dramatic, flamboyant attitude towards mental illness; a dearth of psychiatric personnel in the community.

Originally, we had 31 beds, and two treatment rooms. When we discontinued insulin treatment, the rooms were converted, and we now have 36 beds, with over 100 percent occupancy because of emergency night admissions.

There is a tremendous demand for the service, because word has gone out it is available, and it is covered by some types of insurance. There has been a complete change on the part of the nursing staff, including those not directly concerned with the unit. The gap between the general practitioner and the psychiatrist has diminished. Interns and residents on rotation through the unit are getting a new understanding of, and interest in, the mentally ill.

Contrary to what disclaimers say, it is an easy, smooth-running department. We're enthusiastic, we're glad we have it, and feel we're accomplishing a fuller integration of patient care. Finally, we recommend it because it "just makes us feel better." —*W. Vaughn Herrin*, executive director, Methodist Hospital of Central Illinois, Peoria.

How One Ohio Hospital Controls Its Costs

This hospital made local headlines when it reduced patient room rates. But this reduction is only one result of a continuing program to control costs. Part II of this article will appear in the February issue.

By Ellen L. Davis

● Rising hospital costs are one of the most discussed, and generally one of the least "managed" of all the problems arising from the care of the sick. Few observers, professional or lay, can escape the conclusion that such costs are consistently presented both within the hospital and to the public, on the defensive.

The first impression a visitor to the 105-bed Salem City Hospital Association in Salem, O., receives is one of optimistic confidence. Further investigation uncovers a basic contributing cause: the sense of well-being derived from being not only solvent, but possessed of faith in the future of the voluntary hospital system. An investigation of this condition uncovers the philosophy of C. J. Mosher, Jr., administrator.

In this two-part article, based on on-the-spot interviews, HOSPITAL TOPICS presents the philosophy of Salem City Hospital, and the specific steps taken in its various departments to reduce operating costs, to make of its personnel a closer-knit team, and of its community a more understanding and interested ally.

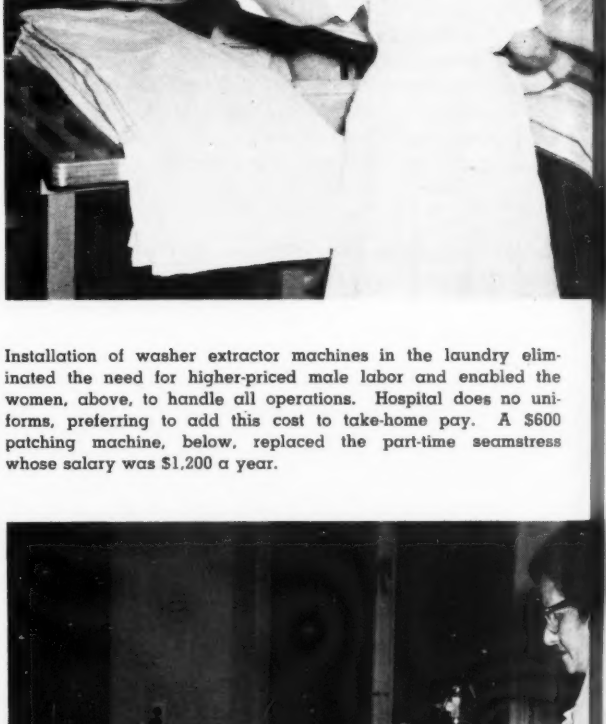
"It seems to me," says Mr. Mosher, "that this defensiveness regarding rising costs has become a chronic illness with many hospitals; that, uncurbed, it can lead to a sort of fatalistic degeneration. We are fond of pointing out that we are the fifth largest industry in the U.S., and usually one of the first 10 locally. We accept the status with expansive and understandable pride. But as we accept the responsibilities this position entails, the vision that gave us growth, the imagination and stick-to-it-iveness that pulled hospitals out of the pesthouse class, somehow falters and goes a-glimmering.

"Since we *are* big business, it behooves us to take advantage of all the yardsticks and all the tools that big business uses to meet its emergencies and assure its continued growth. The price of autos, for instance, has increased enormously in the past few decades. Yet that industry makes no apology for the price of its product, devotes no time or space to bewailing the cost of labor and raw material to its customers. Rather, it creates in us an active desire to acquire its product, and a willingness to pay for it.

"Because we believe that the principles of anything

(Continued on following page)

Installation of washer extractor machines in the laundry eliminated the need for higher-priced male labor and enabled the women, above, to handle all operations. Hospital does no uniforms, preferring to add this cost to take-home pay. A $600 patching machine, below, replaced the part-time seamstress whose salary was $1,200 a year.



When plans were made to remodel the hospital's pharmacy, the best bid for cabinet work was $17,000 for birch cabinets. Following intensive comparison shopping, the job was given to a cabinet-making firm in Youngstown, O. Result: limed oak cabinets made to exact specifications to ideally meet all the department's needs. Total cost: $6.000, Saving: $7,000.

are constant, we also believe that the principles of management should apply anywhere there *is* management. We further believe that in order to have management, a business must define its objectives, and find workable ways of achieving them.

"Without such specific definitions, a new problem coming up becomes a matter of trying to fit the unspecific into the nebulous—a frustrating and wearing exercise involving cross-purposes and, quite frequently, cross words.

"To plot our course, in the face of sharply rising costs, we began with two things. First, we evolved a statement of general policy and objectives, covering patient care, charges for services, personnel policy, community needs, and our school of practical nursing. This is the framework, evolved, refined, and approved by the board of trustees and the administration, within which we operate.

"Secondly, to supplement our permanent association with a hospital consulting and auditing firm, we hired an industrial consultant to further help us analyze our problems objectively, decide on solutions, and maintain constancy in applying those solutions."

Salem City's whole philosophy goes back to people. As regards personnel, it hires the most competent available for all departments, and pays them the best possible wage. As regards patients, it gives them the best possible care, and does not expect them to pick up the tab for major expansion, practical-nursing education, or any other items not directly concerned with their personal recovery from illness or injury.

It has not taken advantage of the Hill-Burton program, nor similar grants or federal loans, nor vocational training funds, preferring to maintain its entity as a self-sustaining, going concern. It has not had a fund drive for 12 years. To date, its major sources of improvement funds are funded depreciation, bequests, foundation grants, year-end donations, and some operating surplus.

Starting with competent people and ending up comfortably solvent is a process involving many small things—including the solicitous care of nickels and dimes.

The hospital has a full-time board radiologist and pathologist, L. A. Cobbs, M.D., and W. A. Kolozsi, M.D., respectively. The comptroller, Harold P. Graham, spends as much time looking into and guiding the operation of various departments, statistically, as he does looking into his ledgers. He is a college graduate in his field and primarily experienced in business.

The full-time housekeeper was persuaded to leave the business field to become a hospital executive. Martha Bailer, medical records librarian, is one of only a few certified (CRL) librarians in the state. There is a hospital-paid house physician. The board of trustees includes a registered nurse who contributes a great deal to liaison between hospital and lay thinking by visiting patients daily.

The word "executive" is used advisedly, for every department head is so considered, and so functions. Department-head meetings include board members and medical staff members, as well as department heads. The group elects its own chairman. The administrator sits in, and his vote counts for neither more nor less than that of any member of the group. These meetings, however, do not conflict with the normal line of authority.

Having qualified personnel working full-time at bet-

ter-than-average salaries pushes costs up per capita, but saves money in the long run. By selecting superior workers, the hospital adds to its staff men and women who are not only willing to carry out board policy, but are cognizant with, and supportive of, the relationship between service and costs.

Fifty-five percent of Salem City's operating expense is its payroll; 10 percent is professional fees. The other 35 percent goes for supplies and maintenance. As the last figure decreases, policy automatically increases the first. Staff members know this; know that carelessness with equipment will boost the supplies figure, and curtail or delay a pay increase. Ergo, they respect their time and their tools, and treat them accordingly.

There is no personnel director on the staff. "This, we believe," explains Mr. Mosher, "is part of the administrator's job in the smaller hospital. A simplified but complete system of records gives us a detailed picture of operations without encroaching on our other work. Two hours every two weeks devoted to a review of records means that new names become real people; sick leave can be interpreted for what it is—absence because of illness, or absence because of inclination; high-caliber accomplishment can be spotted, as can be goofing off; unfair discrimination is prevented.

"This review puts us in a position to intelligently control wages. The automatic-increase system we use is, of course, better than nothing. But we want a better system, and are working on a means of additionally rewarding initiative and superior contribution."

By fulfilling employees' desire for more take-home money rather than extras (which generally most employees do not consider in terms of money), Salem City has accomplished a dual purpose: the workers are more satisfied, and savings are channeled into higher wages and better equipment.

The hospital laundry does no uniforms, but adds this cost to the take-home pay. The direct cost in the laundry is under $15,000 per year.

A similar policy is followed regarding meals. The establishment of a pay-meal system has been a factor in cutting food costs. Personnel can buy meals there more inexpensively than elsewhere. But if they want to bring their own sandwich, that's their prerogative.

DIETARY

Speaking of food, here are some of the things Salem City has done to cut costs in the dietary department.

Finding that between-meal nourishment was being abused, the hospital established a rigid control to eliminate waste. Patients are served all the food they desire; non-patients understand the purpose of the nourishment.

Portion control (a hearty helping as against a left-on-the-plate serving), a selective menu, and a standardization of food items were instituted. The hospital formerly had a choice of about 18 fruit juices. The average patient stay is five days. No one—except patients forcing fluids, and they don't much care about variety—could possibly work his way through the selection. Nor is he hospitalized long enough to grow tired of the more limited choice of three or four.

A control on labor costs is kept by working closely with the dietitian, Jean Williams, to determine the exact number of workers she needs to do her job effectively.

"There is nothing startling here," comments Mr. Mosher, "because most people aren't impressed by what I call nickel-and-dime savings. Yet what kills a hospital financially are the nickels and dimes that get away."

No one, however, can fail to be impressed by the following figures. In 1951, Salem City's food bill was $70,732. Since then, there has been a 16 percent increase in patient days, and a 6.9 percent increase* in the cost of food. On the basis of these figures, the hospital's 1958 food bill should have been $86,930. Actually, it was $48,000.

LAUNDRY

In the hospital laundry, the installation of washer extractor machines eliminated the need for higher-priced male labor to handle the heavy work. A patching machine did away with the need for a half-time seamstress. The patcher costs $600. If the hospital depreciates $100 a year for the machine, the comparative figure is the $1,200 a year which was the salary of the seamstress.

*U.S. Department of Labor, Consumer Price Index.

Manufacturers' representatives find easy parking immediately outside the purchasing office. Inside, they find comfortable chairs, good lighting by which to read current magazines, and plenty of hot coffee always on hand. Curtis Miles, of Johnson & Johnson, enjoys the salesmen's lounge while he waits.

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Combatting Drug-Resistant Organisms

...A World-Wide Problem

• What is being done to treat resistant infections and to limit or prevent the spread of drug-resistant organisms, in the United States and throughout the world, formed the basis for the International Colloquium on Resistant Infections, presented November 20 and 21 in New York City under the auspices of the United States Committee of the World Medical Association and Eaton Laboratories, Norwich, N.Y.

Designed to pool the knowledge and experience of top clinicians and researchers from all geographic areas, the program was divided into sections, each one exploring a separate aspect of the over-all problem. In the following abstracts, TOPICS presents highlights of the discussions most pertinent to hospital personnel.

The Hospital Environment

Carl W. Walter, M.D., associate clinical professor of surgery, Harvard Medical School; and department of surgery, Peter Bent Brigham Hospital, Boston
CHAIRMAN

Robert Blowers, M.D., director, Public Health Laboratory, General Hospital, Middlesbrough, England

H. Taylor Caswell, M.D., clinical professor of surgery, Temple University School of Medicine, Philadelphia

Valerie Hurst, Ph.D., assistant professor of microbiology, University of California Medical Center, Berkeley

Ruth B. Kundsin, Sc.D., resident bacteriologist, Peter Bent Brigham Hospital, Boston

Clayton G. Loosli, M.D., professor of medicine and dean, University of Southern California School of Medicine, Los Angeles

H. Rocke Robertson, M.D., professor and head, department of surgery, University of British Columbia (Canada) Faculty of Medicine, Vancouver

R. A. Shooter, M.D., consultant bacteriologist, St. Bartholomew's Hospital, London, England

Dr. Walter: It is the job of this panel to show that something can be done about the local hospital infection situation and that antibiotics can be returned to therapeutic usefulness.

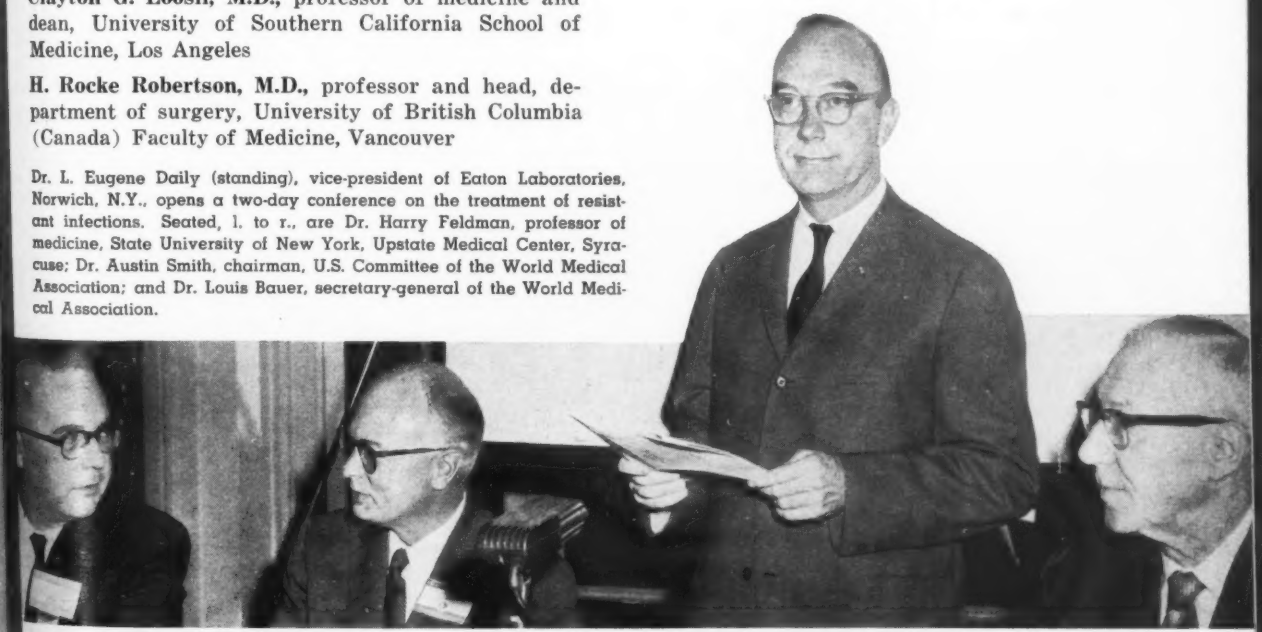
To achieve a safe position, every hospital must control eight to ten factors contributing to the spread of infection. This is difficult, and every environment must be surveyed individually to define its contributing factors.

Environmental spread of infection is wider and more subtle than is generally realized. Few people appreciate the subtleties of paths of communicability. Epidemiology is impotent until basic ecological data of staphylococci can be applied to the clinical situation.

Where Do Pathogenic Bacteria Come From?

Dr. Robertson: Possibly bacteria may enter the hospital through a window, or in some similar way, but they are more likely to come from an infected patient. In an experiment we carried on, floors, walls, bed rails, and other areas of a room were cleaned and disinfected. A pair of "clean" patients were admitted, and the room cultures were practically negative for nine days. Subsequently, a pair of staphylococci-infected patients were admitted, and there were positive cultures within 48 hours. I believe the wards become contaminated by being occupied by people who have infections or are carriers of infecting organisms.

(Continued on page 38)



Dr. L. Eugene Daily (standing), vice-president of Eaton Laboratories, Norwich, N.Y., opens a two-day conference on the treatment of resistant infections. Seated, l. to r., are Dr. Harry Feldman, professor of medicine, State University of New York, Upstate Medical Center, Syracuse; Dr. Austin Smith, chairman, U.S. Committee of the World Medical Association; and Dr. Louis Bauer, secretary-general of the World Medical Association.

Contamination of a Nursery

Dr. Hurst: I believe that the personnel who contaminate hospital wards actually have infections themselves, even though the infections may be too small to warrant staying off duty. In nurseries, an additional source of infection is the older infant who has been colonized. Often the common conjunctivitis attributed to chemical irritation is a staphylococcal infection.

The infant born of a mother who is a carrier is also a possible source of infection. This would appear to be a positive source, but studies show that it is *not* a frequent one. The staphylococci of the newborn are those of the hospital or nursery, and the infant may more often be the one to transmit infection to the mother.

We recently opened a new hospital in which the nursery was air-conditioned, less crowded, better staffed and thought to be ideal. But we subsequently found ourselves no better off as far as staphylococci were concerned.

On the morning of transfer, nose and throat cultures were done on infants and personnel to assess the carrier state. Air cultures were being used as an index of contamination of the nursery air.

The entire week prior to moving, personnel had worked in the new nursery setting up, but no air cultures had been positive. On moving day, the count of coagulase positive staphylococci in the new nursery rose. The count in the old nursery remained exactly what it had been. This was the first indication of guilty infants. The second came as counts were obtained in various places in the utility rooms, nurses' dressing room, corridors—each only about one-third of those in the nursery.

Phage typing provided the most conclusive evidence. Eleven strains of staphylococci were identified. Only three of 14 infants had one particular strain when transfer occurred. By the time of discharge, 12 of the 14 carried the same strain. In personnel nine carriers were found, but each had a different type and none had the type predominant in infants or air.

With only three infant carriers, how could one account for such heavy contamination on the first day? The first thought was that nose and throat cultures were not revealing the whole picture. Perhaps the other 11 infants had had the same strain of staphylococci in other parts of their bodies. This subsequently proved to be exactly true.

Daily nasal and cord cultures were taken. The cord was colonized two days prior to the nose. Rates of colonization have been followed on different areas of the body for a year. Eight different sites have been studied on 350 infants, and colonization has occurred in the following order: cord and groin—first; abdomen, axilla, rectum—next; and throat, eye and nose—last. The extent of colonization seems to depend on how early infants have contact with staphylococci.

The important conclusion to us is that the infant may have skin loaded with staphylococci by the time it leaves the nursery. Whether or not it develops infection seems to depend on the strain carried. Some may develop infection a considerable time after discharge, and others may carry the strain indefinitely.

Transmission from older infants to newborn is apparently by the indirect route of air, dust, lint, nursery equipment, hands of personnel, infected personnel (asymptomatic or otherwise). We believe that the latter group of personnel acquire their staphylococci from handling heavily contaminated older infants. Thus, nursery contamination can be alleviated by preventing the colonization of newborn by blocking routes of transmission from older infants.

How Are Bacteria Spread Throughout a Hospital?

Dr. Caswell: Colonization of nasopharyngeal and skin areas has indicated that contaminated hands can produce nasal carriers. People do handle their noses, and more bacteria are spread by contact than by droplet; larger numbers of organisms can be found on skin than in the nose, though the reason is not understood.

(Continued on page 40)

Dr. H. Rocke Robertson, professor and head, Department of Surgery, University of British Columbia Faculty of Medicine, Vancouver, shares views on bacterial contamination of the environment with Dr. Valerie Hurst, assistant professor of microbiology, University of California Medical Center, Berkeley.

The 10 questions most often asked about the Control of Staph

Q. ***Where does Staph start from?***

A. First, from an infected patient, then it is everywhere at once. Infection and re-infection are a continuous cycle kept in motion by 1) direct contact from the infected patient to personnel to another patient; 2) direct contact with contaminated objects; 3) contaminated dust and lint settling on or being breathed in by patients and personnel.

Q. ***What is the first thing to do to control the spread of Staph?***

A. Make a thorough study of the problem in your own hospital. Don't overlook any area of hospital service, any patient, or any personnel. This critical evaluation may reveal previously unsuspected sources for infection, particularly in the environment.

Q. ***Do all hospitals have the same environmental problems?***

A. Basically, yes, or the same potential ones. In addition to known infection-sensitive areas – such as nurseries and obstetric wards, operating rooms, pediatric wards, isolation wards–there is the hazard of infectious organisms "travelling" through the entire hospital by whatever means is available to them. As a result–hospital-acquired infections can complicate the patient's case, increase necessary care, and jeopardize complete recovery. Hospital personnel may become carriers or even patients.

Q. ***How does Staph "travel"?***

A. Staph is a pathogenic parasite which, once outside the human host, attaches itself to dust and lint and lurks there waiting to be stirred up into the air where it can invade the human host through the respiratory tract or open wounds. In human tissues, Staph is hard to kill as it multiplies aggressively and resists most antibiotics. In the environment, dormant Staph can live for months – but *it can be reached and killed quickly if the proper measures are taken.*

Q. ***What are the "proper measures" to kill environmental Staph?***

A. Disinfection. Routine use of the proper type of disinfectant on any or all surfaces which can become contaminated by airborne dust and lint, by spray from mouth and nose, or by direct contact–floors, walls, furniture, equipment, etc. Use of the same type disinfectant for blankets and linens from which contaminated lint can come.

Q. ***What is the "proper type of disinfectant"?***

A. Phenolic disinfectants have been proved effective by every standard laboratory test and in actual hospital infection. In a special report[1] on the A.M.A. Conference on Staphylococcic Infections, John W. Brown, M.D., states, "The frequent and thorough application of the phenolic germicides (disinfectants) in proper concentration has accomplished more toward eliminating airborne bacteria from a hospital environment than any other method".
Lehn & Fink's Amphyl®, O-syl®, Lysol®, and Tergisyl™ are all phenolic compounds.

Q. ***Do these Lehn & Fink disinfectants kill other organisms besides Staph?***

A. Yes. The action of L&F disinfectants is termed "broad spectrum". Besides being staphylocidal, they are tuberculocidal, fungicidal and widely bactericidal–killing organisms common to the hospital such as those causing infant diarrhea.

Q. ***What about costs? Will increased control measures increase operating costs of the hospital?***

A. No. After continued experience with Lehn & Fink disinfectants, Ralph Adams, M.D., reports,[2] "An important job recognized as such, interested personnel, and good methods are all needed to achieve a cleaner, safer hospital – yet at no substantially greater maintenance cost–particularly when the cost of infections is taken into account". A well-correlated infection control program can stabilize operating costs.

Q. ***Whose responsibility is it to see that there is a "well-correlated" infection control program?***

A. First, the administrative head of the hospital, but he cannot do it alone. He needs an effective Infection Committee to assist him. Real control requires the help of every department head and everyone in each department. Much specific information is available on procedures which apply to specific departments. The Administrator needs the cooperation of everyone in establishing standardized methods. Since the Housekeeping Department reaches into every part of the hospital and has the job of keeping the environment aseptically clean, its responsibility is great.

Q. ***Where can the hospital turn for practical information on disinfection methods?***

A. To improve control quickly, the best source is the established disinfectant manufacturer. Lehn & Fink has been solving the problems of environmental disinfection in hospitals since 1874. We hope you will draw on this experience. The information we can provide will save time and trouble in analyzing your infection problem and instituting effective controls. Amphyl, Lysol, O-syl and Tergisyl are all effective phenolic disinfectants. Each has individual characteristics which frequently determine your choice for standardized use. Samples and detailed literature will gladly be sent on request.

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SPECIALISTS IN ENVIRONMENTAL ASEPSIS

1. J.A.M.A. 166:1185, Mar. 8, 1958. 2. Res. Physician 4:112, Sept. 1958.

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(Continued from page 38)

Some people can be exposed and not become carriers. In both instances, excellent technics of handwashing were used.

For example, a dressing nurse using good technic never wears a mask, and has not been found to carry coagulase positive staphylococci anywhere on her body. Similarly, some laundry workers handling contaminated linen are free of staphylococci.

The dangerous carrier is the one with clinical disease. Patients' infections can be brought under control if the infections in personnel are controlled. Good technics of handwashing can help limit the development of carriers.

Elimination of organisms from the hospital environment must be the ultimate goal.

Air-borne Contamination

Dr. Shooter: Infections in ward patients can start from seeding during operation, as in the case of 16 consecutive patients with 11 types of staphylococci; from organisms carried by other patients and staff; from organisms carried on the patient himself.

Some staphylococci can be present and give no trouble, and some infections can be controlled in the open ward by ordinary nursing care. In one study, 398 patients were watched, and it was impossible to correlate any infection that developed within 14 days with the infection related to the previous occupant of the bed.

In a sepsis control program accurate recording of infections, assessing of corrective measures one at a time, and correlation of corrective measures with incidence of infection are all needed.

Dr. Blowers: The relative amount of infection coming from the operating room and from the ward is not known. One can assume an infection was seeded in the operating room if deep sepsis develops in a clean wound. Indeed, there was a fall in sepsis rates when hygiene in the operating room was improved.

How do bacteria actually get into wounds during surgery? The most obvious source of bacteria is the patient's own skin. Even though it is well disinfected, all organisms cannot be destroyed. Swabbed skin has been cultured and bacteria classified. In 651 cases of surgery where 31 staphylococcal infections developed, six patients were not skin carriers preoperatively; 11 carried organisms on the skin preoperatively, but a different strain than that infecting the wound; two were skin carriers with wound organisms the same as on their skin, but foreign to the hospital; and 12 patients had skin and wound organisms which were the same and also identical with strains found in the hospital.

Apparently, however, one must look to other than skin for the source of more than half of the infections. The surgeon's skin is a possibility, since 60 to 70 percent of surgeons carry staphylococci on their skin, no matter how thoroughly they prepare it. Gloves punctured during surgery (an estimated 30 percent), and the skin about the top of the glove at the wrist, where it is frequently wet and protected with only the fabric of the gown sleeve, provide sources.

Air sampling during surgery shows that there is very heavy contamination of the air, especially with the "general fuss" incidental to beginning a case. Surgery starts before these counts have had time to fall, and the patient's wound is exposed to a prodigious number of organisms.

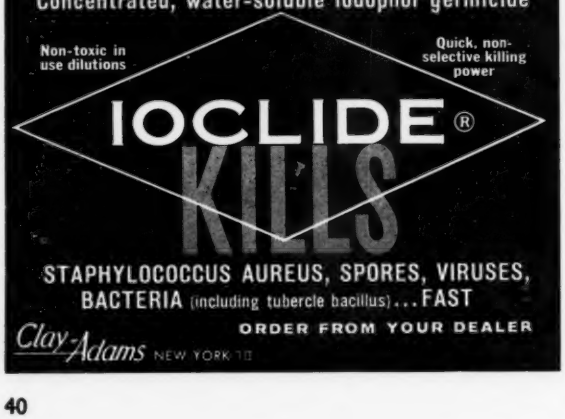
Exhaust fans in surgery will suck air in from wards and corridors; when filtered air is used to ventilate, with the flow from the operating room to corridor, air counts are lower. Even under the latter circumstances, however, aerial contamination is still high.

Where do organisms come from in a room with properly filtered and sterile air? From the noses and throats of people during talking and breathing? Probably organisms come more often from the skin of carriers, particularly if they are shedding. Street clothing, too, is loaded with organisms. Surgical gowns worn over street clothes make very little difference in this scatter. Skin carriers shed many organisms even through clean operating room clothes.

Two pieces of equipment contribute to air contamination in the operating room: blankets and electric suction machines. Organisms are freed from the former into the air as patients are covered and uncovered. In the latter instance, very often the fluid in the collection bottle is contaminated, and the exhaust air coming from that bottle will be similarly contaminated.

Dr. Loosli: Contamination of bedding with bacteria from skin, nose and throat, and gastrointestinal tract comes from both well and sick individuals. Naturally, the "nasal dispersers" and those with skin infections contaminate to a higher degree.

Bacteria from dried secretions are dispersed into the atmosphere whenever clothes are changed or linen on the bed removed. As a result, handling and sorting of soiled hospital linen results in a great increase in the number of organisms in the air. Additionally, when soiled linen is placed in the hospital



Shown discussing ways and means of meeting the problem of resistant infections are, l. to r., Dr. Ernst Fromm, chief director of laboratories, State Hospital, Hamburg, Germany; Dr. Robert Blowers, director, Public Health Laboratory, General Hospital, Middlesbrough, England; Dr. R. A. Shooter, consultant bacteriologist, St. Bartholomew's Hospital, London; Dr. W. B. Stillman, director of research, Eaton Laboratories; Dr. Louis H. Bauer, secretary-general of the World Medical Association; Dr. Andreas Palmlov, assistant surgeon, St. Erik's Hospital, Stockholm; Dr. Louis A. Sanjurjo, professor of urology and chief of section, School of Medicine, University of Puerto Rico; and Dr. Jean Auvert, chief of surgical laboratories, Necker Hospital, Paris.

laundry chutes, the updraft of air carries liberated organisms with it and disseminates them through the corridors. Even in the hospital laundries themselves, clean washed-and-ironed bedding may become recontaminated with air-borne organisms liberated at the time of sorting. Re-evaluation of hospital laundry procedures, construction, and ventilation control are certainly necessary.

How Can the Spread Be Stopped and the Reservoirs Be Eliminated?

Dr. Robertson: Every possible effort can be made to isolate the infected patient, maintaining a regular quality of nursing care. Dust must be controlled; laundry from all patients must be handled with care; all material used by infected patients must be handled as well as possible. We can also cut down on the amount of contamination a patient spreads by limiting his travels.

Dr. Shooter: One cannot effectively isolate all patients, and it is not positive that the patient with infection is the only one needing isolation. Particular attention should be given to people who are thought to be spreaders of epidemic staphylococci, and they should be isolated.

Dr. Caswell: This is a difficult problem, and the answer is not known. Certainly, patients with severe degrees of infection—especially staphylococcal respiratory disease and extensive cutaneous disease—should be isolated.

Dr. Walter: Hospital design is inadequate to the task. Hospitals cannot provide facilities for this type of care.

Dr. Caswell: That is a good point. Actually, the small hospitals are better off than the large ones in this respect. Architects should pay particular attention to this need in current and future planning.

Dr. Hurst: In the nursery, control depends on how much money the administrator has to spend for nurseries especially designed to cut down opportunities for transmission of infection.

Eliminating the pooling of infants of different ages in one area will help. Individual cubicles would be good. Perhaps an isolette type of unit for every baby so that he may be kept in his own environment may be developed one day. We might also use air locks to separate infants from the rest of the hospital environment. More use may also be made of rooming-in units, though not as presently constructed. Today, they serve psychological purposes rather than epidemiological ones.

Perhaps the administrator must be reminded that while the cost of providing this type of care is high, the cost borne by a parent when an infant takes home staphylococci and circulates them throughout a family may go on for several years.

Dr. Robertson: It is common for patients to go home and infect their families for years after. In trying to break the cycle it is not enough to clean up the nasopharynx and skin, one must go into the home and clean mattresses, pillows, bedding. Bath tubs, wash basins, toilet seats must be disinfected. A complete job is essential if the cycle is to be broken.

Dr. Walter: We may be on the verge of a major public health problem. In one study, infection throughout a community has been traced to baby sitters, pre-school nurseries, and a community launderette.

Dr. Shooter: We, too, have seen spread to the community.

Dr. Walter: Caring for the patient in surgery or hospital today means taking the responsibility for following the patient home to protect his family and community.

Dr. Caswell: I do not believe many people are conscious of the severity of this problem. In one study, 25 percent of families of patients discharged with staphylococcal infection were found with staphylococcal cutaneous disease. In 1958, this figure rose to about 40 percent. There is no longer a "hospital strain" of staphylococci; it has become a "community strain."

Dr. Walter: What is to be done with the surgeon who has a boil?

Dr. Caswell: I feel strongly that he should remain away from the hospital. If he can be reached in no other way, he should be impressed with the fact that he is liable for damages if a lawyer can trace any patient's infection to his lesion.

(Continued on page 44)

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- to wash patients ante and post partum
- to wash patients who have a communicable disease
- to wash patients who have an infective disease of the skin
- for surgeons' hand preparation
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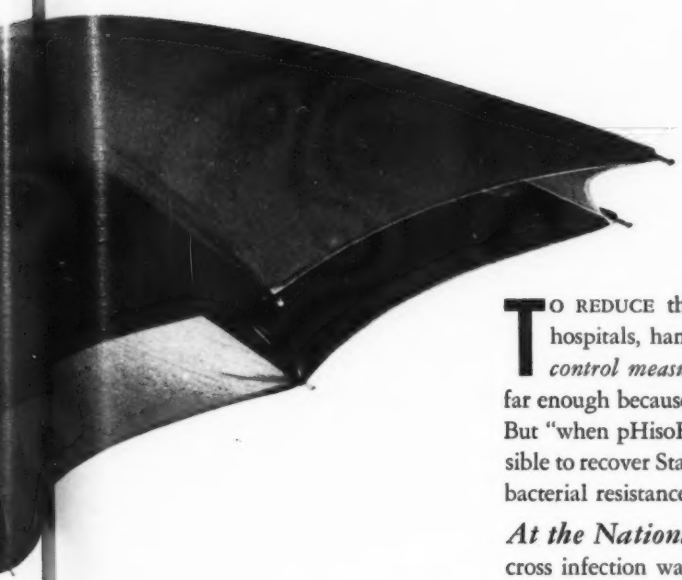

TO REDUCE the spread of staphylococci and other organisms in hospitals, handwashing is "... *possibly the most important single control measure.*"[1] Just soap-and-water cleansing "... does not go far enough because it cannot be relied upon to kill the staphylococci."[2] But "when pHisoHex is used by nurses for handwashing, it is not possible to recover Staphylococcus pyogenes from their hands."[3] In addition, bacterial resistance to hexachlorophene does not develop.[4]

At the National Institutes of Health, the incidence of hospital cross infection was practically eliminated when *all* hospital personnel washed with pHisoHex before and after caring for any patient.[5] Routine use of pHisoHex for bathing infants as well as for routine handwashing by hospital nurses has helped prevent staphylococcal epidemics among newborn infants.[6,7]

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1. Brown, J. W.: *J.A.M.A.* 116:1185, March 8, 1958. 2. Klarmann, E. G.: *Am. J. Pharm.* 129:42, Feb., 1957. 3. Hardyment, A. F.: Pediatric Clinics of North America, Philadelphia, W. B. Saunders Co., May, 1958, p. 287. 4. Gould, B. S.; Frigerio, N. A., and Hovanesian, J.: *Antibiotics & Chemother.* 7:457, Sept., 1957. 5. Benson, M. E.: *Am. J. Nursing* 57:1136, Sept., 1957. 6. Wysham, D. N., et al.: *New England J. Med.* 257:295, Aug. 15, 1957. 7. Agate, G. H.: *J. Mich. M. Soc.* 57:853, June, 1958. 8. Medrek, T. F., and Litsky, W.: *Surg. Gynec. & Obst.* (Internat. Abstr. Surg.) 104:209, March, 1957.

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RESISTANT ORGANISMS

(Continued from page 41)

Dr. Walter: How are we to handle these staff problems and elicit cooperation from administration?

Dr. Caswell: The answer to this depends on money again. Personnel with infections are not likely to stay off duty if their income is threatened. Some provision must be made to cover them with compensation or similar plan. The surgeon, of course, will lose considerable income, but it could be negligible compared to the potential loss from a legal action.

Dr. Walter: Would you think it extreme to compare an active staphylococcal lesion to an open chancre, or a case of tuberculosis or typhoid?

Dr. Loosli: I think this is going too far. We are more careful with our treatment of boils than chancres.

The patient with a staphylococcal lesion is a potential hazard. Personal hygiene is a must for everybody, since hands are constantly in touch with pathogenic organisms. Bacteria will survive for months on the hands without dying out. Everyone concerned with hospital activities must practice good hand hygiene.

Dr. Walter: Ventilation in many hospitals is established only as a whim, or for personal comfort. Under these circumstances, how are we to control the airborne transmission of dust and organisms?

Dr. Blowers: The first thing to do is prevent scatter of organisms into the air. Four points are pertinent:

—The banishment of personnel with active staphylococcal infection from the operating room

—Daily bathing or showering by everyone before beginning work in the operating room

—Elimination of blankets and street clothing from the operating room

—Drastic reductions in the amount of activity in the operating room during surgery.

In one situation we counted 60 to 70 separate operating room entrances and exits during an hour, and only a few of these could be actually justified. There is too much needless motion in every operating room. We need a large "sense of surgical conscience" to meet some of these requirements.

Too many ventilating systems merely blow air in and around to dilute bacteria. Ideally, air should be blown in at the top of the surgery, and be pushed out by downward displacement. Air counts with this system would be about one-fifth of the average.

Dr. Kundsin: Hospitals also need trained cleaning crews, and personnel must recognize the need for allowing these crews time to do their jobs.

Dr. Caswell: How can you carry out your technic of floor care throughout a hospital without creating chaos?

Dr. Walter: In the operating room, delivery room and nursery, this is a daily chore; on the wards it occurs weekly.

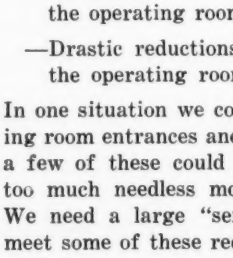
Cleaning times on wards are assigned to specially trained crews. One man goes through a corridor with a dispensing and scrubbing machine; he is followed immediately behind by another man with a wet pick-up vacuum. The corridor or room is not out of use any longer than usual.

Q. What do you recommend for cleaning floors this way?

Dr. Walter: I do not think it makes any difference what detergent-germicide is used, provided one recognizes that all are surfactants, and there has to be enough germicide to take care of both the surface and the dust. Concentration is important, but one can use a very dilute solution to spare floor surfaces by having a large enough volume to provide adequate concentration.

With all the discussion for providing a hygienic environment, some criteria need to be established. I would suggest the following as a guide:

—Floor Counts:	
Operating Room	0-5 sq. cm.
Ward	5-10 sq. cm.
—Air Counts:	
Operating Room	5-10 cu. ft.
Ward	10-20 cu. ft.
—Bed Rails	5-10 sq. cm.
—Soap	Sterile
—Bedside Water	Sterile
—Bedding	2 mm. zone of inhibition



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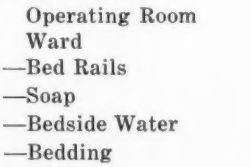

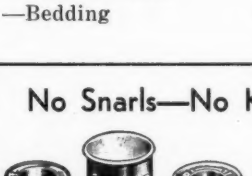

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How Electronic 'Brains' Can Work for Hospitals

New horizons in hospital accounting through electronics

First in a series on potential uses of electronic computers by hospitals

By John H. Gorby*

• Hospitals are accused of many things, but they cannot be accused of failing to keep records. There is nothing so dear to the heart of the average employee as a complex form and a fistful of sharp pencils. If there were hospitals in ancient Assyria, records were probably kept in cuneiform characters on clay tablets.

The ever-growing demand for medical services by a health-conscious nation has imposed a staggering burden on the average hospital business office. Hospitals were attempting to handle this enormous increase in paper work with tools that were inadequate for the job. It was easier and faster to add personnel than it was to sit down, survey the need, and plan for new equipment.

Administrators were convinced that there must be increased productivity per employee man-hour and that one recording should take care of as many records as possible. Reduction in cost took on real meaning when it was realized that $100 a month saved over previous cost was the equivalent of an annual return of 4% on a $30,000 endowment fund.

HOSPITAL ACCOUNTING PROGRESS

The science of accounting as applied to hospitals made rapid strides during the second decade of the 20th century. Traditionally, hospitals have been slow to adopt new ideas and methods; but the business offices were a little more progressive than other departments. Mechanization, through the medium of accounting machines, was first introduced in this period. It is curious, but true, that manufacturers found that hospitals eagerly awaited the visit of their representatives, and sales were quickly completed.

By 1935, a survey by the National Association of Accounting Machine Manufacturers indicated that in hotels of 250 rooms or over the operations were 57 percent mechanized. In hospitals of 300 beds or over, 71 percent had been converted to mechanical accounting methods.

This period also witnessed a rapid growth in the use of duplicating equipment, electric typewriters, electric adding machines, and calculators. The 1935 survey was not in any sense a complete one, nor was it directed, except accidentally, to the hospital field. But the data, sparse though it is, is revealing as to the extent of mechanization during this period.

In 1927, this same group made an estimate of the extent of mechanical equipment in hospitals on the eastern seaboard. Apparently there were fewer smaller hospitals, or the survey ignored them, as the report covers hospitals in the 150-300 bed group and those over 300 beds.

150-300 bed group

	1927 Estimate	1935 Survey
Electric typewriters	0	17%
Electric adding machines	1½%	37%
Calculators	0	13%
Accounting machines	0	19%

Over 300 beds

	1927 Estimate	1935 Survey
Electric typewriters	0	29%
Electric adding machines	17%	89%
Calculators	6%	92%
Accounting machines	0	71%

Improvement in accounting procedures for the smaller, or community hospitals, also occurred during this period. The accounting board, or peg board, as it was sometimes called, reached an efficient state of development in the late 1930's. This "peg board" permitted a person to complete several records at the time the origin ' record was written. For example, as the cashier was writing a cash receipt, she was also posting the patient's account receivable and preparing the daily record of cash receipts.

In payrolls, the act of writing the check also posted the individual employee's compensation record and the payroll journal. The equipment was inexpensive and went a long way toward elimination of the unnecessary copying and recopying that is so costly and productive of errors.

It was found that mechanization by itself did not always increase efficiency. Machines are but devices and must be operated by people. The greater the degree of mechanization, the more is a continuing program of inservice training required to make certain that equipment is being operated at peak efficiency. Poor operating habits had to be discouraged. It saved time, for example, for the operator of a NCR 3100-class accounting machine to plug the cross-footer with

(Continued on page 46)

*1816 Lincoln Ave., San Diego 3, Calif.

chewing gum. But the manufacturer never intended it that way!

Functions can be mechanized efficiently and economically when they are sufficiently repetitive. In the factory, in which mechanization first began in the 1880's, it became apparent that certain operations could be handled by machines. Hence, the drill press, grinder, lathe, and milling machine were invented.

In a similar way, equipment was invented to mechanize paper work. One of the first "paper-work" machines was the ink stamp, possibly because the operation of applying a name, date, or "paid" was so obviously repetitive. As additional mechanization was applied to paper work, machines began to take over the long and painstaking tasks of accounting.

PUNCHED CARD INVENTED

The year 1889 was a memorable date. It saw the invention of the punched card by Dr. Herman Hollerith. A native of Bonn, Germany, Dr. Hollerith was an employee of the U.S. Bureau of the Census in Washington, D.C. The national census of 1880 took nearly seven years to compile. Congressional ire, potent then as now, was directed in full force at the Census Bureau.

Under the law, Congressional districts are apportioned on the basis of census data. During the 1880's, the country had finally resumed some semblance of normalcy following the turbulent post-Civil War years. The vast migration to the West during these years left the Easterners in control of Congress, based on the census of 1870.

To meet this crisis, Hollerith developed and patented his punch card. The early versions operated by air pressure in the same manner as player-piano rolls were actuated. Later, the cards were "read" by feelers making contact through the holes to a brass drum. Dr. Hollerith formed the Tabulating Machine Co., which was later absorbed by the International Business Machines Co. The name "IBM" is now a household word.

The Hollerith system, as it was called for many years, was slow in catching on in hospital circles. Its capacity for work was so huge that only the largest hospitals could even consider an installation. A leader in the field, Barnes Hospital in St. Louis, spent several years in trial and error and finally developed it to a high degree of efficiency for the hospital field.*

We are now in the Age of Electronics. The requirements of national defense in the early days of World War II made it imperative that our small supply of engineers be relieved of the lengthy, tedious work involved in mathematical computations. The Mark I, Eniac, and Edsac were created. The course of the war and its eventual outcome were strongly influenced by electronic computing machines or, as they are now termed, "computers."

*See "Punch Card Accounting," by Frank Bradley, in *Modern Hospital*, June, 1950, et. seq.

The computer industry, an offspring of radio and radar, mushroomed overnight and became economically feasible through the development of the transistor in 1948. The first digital computer was built in 1944 at a cost of $2,500,000 and filled an entire room. At the present time, an equally efficient machine costs about $200,000 and takes less room than a couple of desks.

EARLY COMPUTERS

The history of computers is a long one. Blaise Pascal, who developed Pascal's Law of Fluid Pressures, built a machine to compute taxes in 1642. Only a short written record of this machine is available. No one seems to know the principle involved.

In 1830, 200 years later, Charles Babbage, an English engineer, designed and built a machine which he called an "engine." This huge machine was comprised of hundreds of gears and cams of very precise design. It was impractical probably because the engineering of his day was not up to the precision standards required by his design. This machine was the first real attempt at automatic computation and was mechanical. An additional hundred years had to pass before an automatic computing device was practical.

In 1944 the Harvard Mark I was built by IBM. It was an electro-mechanical device. In 1946, the Moore School of Engineering in Philadelphia designed and built the ENIAC—the first electronic computer—which contained more than 18,000 electronic tubes. These tubes alone generated enough heat to run a small boiler.

Today's computers use very few tubes. The electrical switching function of the tubes is done by transistors and diodes. A new computer, to be released in 1959, is entirely "solid state" with no relays or tubes.

A machine called EDSAC, built by Cambridge University in England in 1949, is still operating. Today we find such computers as UNIVAC I and II, 1101 and 1103 by Sperry Rand; IBM has the 305, 650, 701, 704, and 705; Underwood's version is the Elecom 125. Minneapolis-Honeywell has produced the DATAmatic 1000 (used by Michigan Blue Cross), and there are a host of others.

In business, a vast quantity of original information has to be processed. Documents are received in all sizes, shapes, and conditions from many different sources. Because the very basis of accounting is the assembling of "like" items the accountant must classify and rearrange these items, visually refer to them, write them down over and over again, perform the necessary calculations, and store the results for years in many different forms or records.

Although accounting applications of business machines require a certain amount of arithmetic such as accumulating totals and balances, the problem is principally one of the "processing" data. A large amount of information is fed into these machines ("input"), and a large quantity of information is produced ("output"). Hence, the origin of their name, "data-processing machines."

The first data-processing machines had to handle information in a series of individual operations. These included punching information into cards, sorting and classifying the cards, producing totals and balances, and finally printing the results. Intermediate results from one machine had to be transferred to another, and many human decisions and interventions were necessary for a complete accounting procedure.

When electronic discoveries were applied, the rate of calculation was vastly increased compared to earlier machines. But more important, a basic new technic was introduced which might be termed "intercommunication." Electronic devices were able to provide "internal" methods for transporting data and intermediate results from step to step. Hence, it now appears that data is fed into one end of a machine system and results come out the other.

This method, however, is not totally different from earlier ones, because each step in a complete procedure must be predetermined and, as it is termed, "programmed." Programming is simply the method for giving instructions to the computers. A series of instructions, called a "program," is expressed in symbols which a machine system can accept and understand. Since a system has no ability to think for itself, it must be told how to handle information in a specific and logical manner for it to produce meaningful answers.

Because electronics has made possible a continuous flow of operations within one system, programming has become essential. The Charles A. Pfizer Co., pharmaceutical manufacturers, recently paid for over 2,000 hours of programming time to produce five minutes of machine time. The company feels the time well spent because it now has a file of possible names for new drugs to be produced which it estimates will last 50 years!

Present machines operate at speeds that are almost beyond human comprehension. For example, the DATAmatic 1000 used by Michigan Blue Cross reads 900 IBM punched cards in one minute. Its "memory" is carried on 3"-wide electronic tape. Ten of these tapes can be searched simultaneously for subscriber information. This "reading" speed is at the fantastic rate of 600,000 digits *per second*. The information requested from the machine is then printed out at the rate of 900 lines of 120 characters each per minute.

The next installment will deal with different types of computers and their operation and application to the hospital field.

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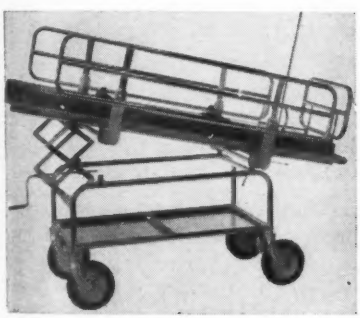

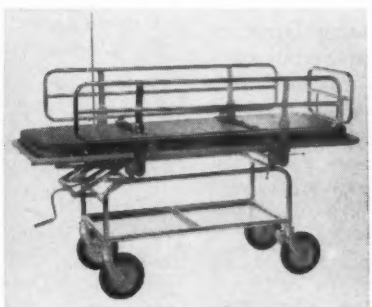

SPECIFICATIONS: (optional)
Length 76½"
Width 29½"
Height 34"

MATTRESS:
25" x 75" x 3"
Foam Rubber.
Cover—(Harco #4626) Conductive.

SAFETY STRAP:
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SIDE RAILS:
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Automatic lock any position.
Rails completely out of the way when down.
5 to 6 inches more space available for the patient when using these rails with the conventional size mattress.

HEAD SECTION:
Hydraulically operated.

HEAD RAIL: Removable.

CASTERS:
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ADJUSTABLE HEAD REST.

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Can be placed in 8 positions around table.

SHOULDER REST. ARM BOARD. LOWER TRAY FOR BLANKETS AND ACCESSORY STORAGE.

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Ambulances, soon to help a New York Hospital make history, are lined up outside awaiting transfer of patients.

Hospital Moves, Patient Care Goes On

• Moving an entire hospital, patients and all, 12½ miles through the busiest part of New York City—this was the problem turned over to James A. Reynolds, assistant administrator of Misericordia General Hospital.

The job of transferring the hospital from its 70-year-old building in Manhattan to a new $9,000,000 brick and aluminum structure in the Bronx was shared by the hospital's other assistant administrator, Joseph P. Kenny, who prepared the new building to receive patients and personnel. Sister St. Marcelle, the hospital administrator, acted as overseer for the entire operation, in consultation wih the Rev. Patrick J. Frawley, director of the Division of Health and Hospitals for the Roman Catholic Archdiocese of New York.

Actual planning was done by a committee representing various departments of the hospital; medical, technical, administrative, nursing, nurse education, and ancillary services. But very early the move took on the character of a community enterprise, for the committee also included representatives of the New York City Police Department and the Department of Hospitals. Further planning called for ambulances to be lent by nine other voluntary hospitals in the city and nearby Westchester. After all, for the first time in the history of New York City there was to be an interborough transfer of a voluntary general hospital in full operation.

Below: Newborn infants in the ambulance, ready for the move.

All plans had to be kept flexible, since the estimated date of completion of particular facilities in the new building kept shifting. Months of problems and preparations led up to moving day, October 9.

The easiest part of the transfer was getting the hospital's basic equipment moved. This was accomplished slowly, over a period of time, until the construction people were able to provide a fairly definite date of completion. As soon as this was known, the supplies—X-ray equipment, blood bank, antibiotics, etc.—except for the quantity needed by the hospital to carry it through the moving day—were shipped to the new location.

Patients and personnel had to be moved in the shortest time possible in order to avoid any interruption in the provision of essential services. General planning for this portion of the move was started six months before the anticipated moving day. A fairly definite program of action was inaugurated two months in advance.

Ultimately, Thursday, October 9, was designated as moving day for the patients and personnel. Up to ten days before even this decision was indefinite, making arrangements difficult. The uncertainty made it impossible to anticipate the patient census on moving day, but plans tentatively called for 40 to 50 patients. (As it turned out, the number actu-

ally moved was 44.) This estimate, prepared two days in advance of the transfer, was complete down to the name of the patient, name of the doctor, condition of the patient, and old and new room numbers. The identification assignment was jointly handled by the nursing department and admitting office.

Certain details could be anticipated. For example, one physician was to accompany each patient in each ambulance. The hospital's school of nursing was to supply one student nurse to every patient. During the move, this student nurse was to be given responsibility for maintenance of the chart, administering necessary medication under the doctor's supervision, and keeping track of the patient's clothing and other belongings.

All patients' belongings were tagged the evening before the move. In the morning, patients were given fresh gowns and these, too, were tagged with the patients' names.

Each department was given a copy of a master plan showing what individuals would travel in specific ambulances. Mass was held at 5 a.m. in the hospital's chapel. Patients were served breakfast at 6:30 a.m. At 8 a.m. the move began.

The building's elevator capacity was limited. To cope with this problem, the less acutely ill patients, suitably blanketed, were wheeled on stretchers to the ground floor. There they waited, positioned in assigned areas, each with a student nurse.

The police department had cleared all parked cars from the street outside. The 23 ambulances which were assembled for the move were lined up at the curb, side by side.

The first to be put into the waiting vehicles were the infants—16 of them. Some were in the arms of nurses, some in bassinets, some in ambulances with their mothers.

Vehicles move down the Deegan Expressway, carrying patients to the new Misericordia structure. The convoy, escorted by police, extended more than half a mile.

After the infants, the less acutely ill patients, waiting on the ground floor, were put into additional ambulances. Then the acutely ill cases were brought down and loaded. This arrangement permitted the acutely ill to remain in their beds a maximum length of time, and to spend a minimum amount of time waiting for elevators or in the ambulances.

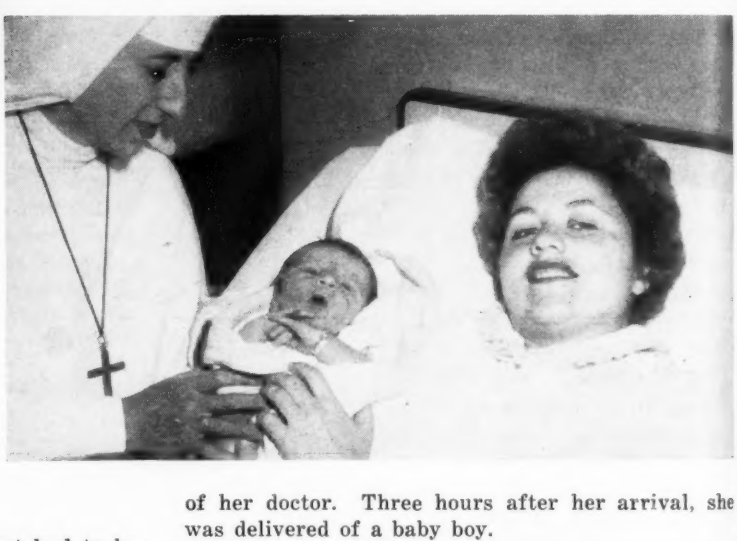
Loading arrangements having been completed, the convoy of 23 motor vehicles, preceded and followed by their police escorts, moved swiftly up Franklin D. Roosevelt Drive, over the Triborough Bridge and along Major Deegan Expressway, to the new building. Except for one ambulance which developed

(Continued on next page)

Ambulances arrive at the modern structure in the Bronx. All that remains is the unloading of patients and final equipment.

Above: Patients are taken from vehicles and wheeled into the hospital. Patients were moved by hospital's own personnel, with qualified outside assistance where necessary.

Left: Sister St. Marcelle, administrator, helps an attendant transfer premature infant from a city ambulance into the new structure. Portable incubator had its own oxygen.



Right: Mrs. Thomas Nicastro and Sister St. Irma, OB supervisor, admire Mark Thomas Nicastro, first baby to be delivered in the new hospital. Born at 12:18 p.m., Mark weighed 8 lbs., 12 ounces.

HOSPITAL MOVES continued

motor trouble, and from which a patient had to be transferred en route, the actual transporting was without incident. The move had begun at 8 a.m. The first ambulance arrived at the new location at 9:06 a.m.

One patient, an infant, was kept under oxygen up to the time it was delivered to a room at the new location. In one specially equipped ambulance, supplied by the Premature Transportation Service of the city's Department of Hospitals an infant was transported in an incubator. One patient, recovering from an operation, had a dressing changed by a physician en route. No patient was receiving intra-venous solutions, but this, too, could have been handled if necessary.

One woman, an obstetrical patient, who was admitted to the old building and had started labor there, was moved to the new building on the order of her doctor. Three hours after her arrival, she was delivered of a baby boy.

The unloading of patients at the new building was done in a sequence exactly opposite to that of loading, and for the same reason. Ambulances were lined up two abreast, and the acutely ill removed first. Then the babies were unloaded, and finally the less acutely ill.

The infant arrivals were installed in an area separate from the nursery. By their participation in the move, they took on the status of new arrivals from the outside. As such, they had to be kept apart from the babies who would be born in the new building.

Physicians made their rounds as soon as the patients were installed in their new rooms. A careful check showed no adverse effects of the move on any patient.

The move had been successful. New York City could claim another first.

Health Insurance *Newsletter*

By State Sen. George R. Metcalf*

Mental Illness Coverage. The problem of providing insurance against mental illnesses on the same basis as physical illnesses was examined thoroughly in Buffalo, N. Y., recently at the second of a series of three hearings held by the State of New York joint legislative committee on health insurance plans. The Buffalo proceedings called attention to what one witness termed "our most expensive health problem."

A full transcript of the Buffalo hearing will be available early this year.

Much of the testimony presented (either in person or by mail and made a part of the record) called for the enactment of legislation to make insurance of mental illness mandatory on the same basis as physical illness. Among those favoring such legislation were:

Matthew Ross, M.D., American Psychiatric Association, representing APA President Francis J. Gerty, M.D.; Mike Gorman, executive director, National Committee Against Mental Illness; Cornelia Wilbur, M.D., associate psychiatrist, New York Medical College; William L. Holt, Jr., M.D., psychiatrist-in-chief, Albany (N.Y.) Hospital; Fraser D. Mooney, M.D., director, Buffalo General Hospital; S. Mouchly Small, M.D., professor and head, department of psychiatry, University of Buffalo School of Medicine; Winfred Overholser, M.D., superintendent, St. Elizabeth's Hospital, Washington, D.C.; Leona Baumgartner, M.D., commissioner of health, New York City; and William S. Edgecomb, director, Erie County Community Mental Health Board.

Others who appeared, or sent in statements, expressed equal concern over the problem but warned against mandatory legislation for a variety of reasons—administrative difficulties, lack of personnel and facilities for care and treatment, and the possibility of an increase in premium rates. Among those expressing misgivings were:

Msgr. Joseph M. McPherson, assistant director of hospitals, Roman Catholic diocese of Buffalo; Carl M. Metzger, president, Hospital Service Corp. of Western New York; and Wilson Wells, executive director, Western New York Hospital Council, Buffalo.

At the third and last hearing, on December 5, the committee heard opinions of both proponents and opponents of suggested legislation to make mandatory the inclusion of mental illness in standard medical prepayment plans.

Among those appearing in support of the projected legislation were Cornelia Wilbur, M.D., associate psychiatrist, New York Medical College, New York City; Abraham S. Lenzner, M.D., Nassau County Neuropsychiatric Society; Peter Rogatz, M.D., public health committee, Community Council of Greater New York; and Otis G. Pike, attorney, official in a private psychiatric hospital.

Those appearing in opposition to the measure included Gerald S. Parker, representing commercial health-insurance companies; Frank Van Dyck, Associated Hospital Service, New York City's Blue Cross plan; and Lynn Doctor, vice-president, United Medical Service, Inc., New York City's Blue Shield plan.

The committee is studying testimony from all three hearings before deciding whether legislation on the problem will be introduced.

* * *

Experiment in Psychiatric Insurance. Although taking no position at the Buffalo hearing, either in favor of or in opposition to mandatory inclusion of mental illness coverage in insurance plans, Arthur H. Harlow, Jr., president, Group Health Insurance, Inc., gave details on an experiment in insuring such care by his group.

GHI plans to launch soon a two-year program of free ambulatory psychiatric care for a selected sample reflecting the over-all occupational groupings of GHI subscribers. It is expected that the 1,500 case histories the experiment is designed to develop will be of great help in forecasting future incidence of mental illness, as well as determining utilization of benefits under the plan.

"As far as we know," Mr. Harlow said, "this is the first time that psychiatric treatment has been singled out for analysis by a medical insurance plan, so that the records to be compiled constitute an entirely new approach to unexplored facets of both psychiatry and medical insurance."

* * *

Mental Illness Costs. A recent survey of the costs of mental illness in Ohio showed that the annual bill is $71,000,000 for the population of approximately 3,000,000. The cost for each family thus averages $24 a year, or $2 a month.

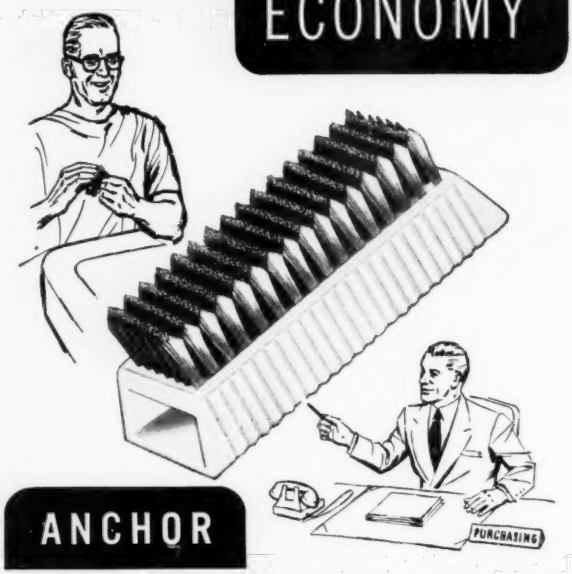
* * *

Costs of Medical Care. Some idea of the increase in costs of various components of medical care in the

(Continued on next page)

*Chairman, State of New York joint legislative committee on health insurance plans.

FIRST IN··· QUALITY ECONOMY



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last eight years in comparison with the costs of food and housing is given in the following table, published by the Health News Institute:

Consumer Price Indexes
(1947-49 = 100)

March	Total Medical Care	Prescription and Drugs	General M.D. Fees	Hospital Room Rates	Food	Housing
1958	142.3	120.2	138.3	196.4	120.8	127.5
1957	138.0	116.7	134.5	187.3	115.4	125.6
1956	132.6	113.7	128.4	173.3	111.7	121.7
1955	128.0	111.2	124.3	164.4	110.9	120.0
1954	125.2	110.1	119.9	156.8	112.6	119.1
1953	121.3	108.9	116.1	148.2	112.8	117.7
1952	117.2	107.9	113.0	139.5	114.6	114.6
1951	111.1	106.9	108.0	126.9	112.6	112.4
1950	106.0	103.9	104.0	114.6	101.2	106.1

* * *

New Zealand Plan. Most New Zealanders, including physicians, are happy over the services rendered by one of the world's oldest "cradle-to-the-grave" systems of social security, Howard A. Rusk, M.D., reported recently in his column in the *New York Times*.

Many, however, worry about its cost, he pointed out, noting that this had increased from £13,000,000 ($36,000,000) in its first year to £77,492,000 ($210,979,024) in 1956. The system is now 22 years old.

Other observations in the same report:

"Despite the fact that many of them are overworked, general practitioners are fairly well satisfied with the medical aspects of the social security system."

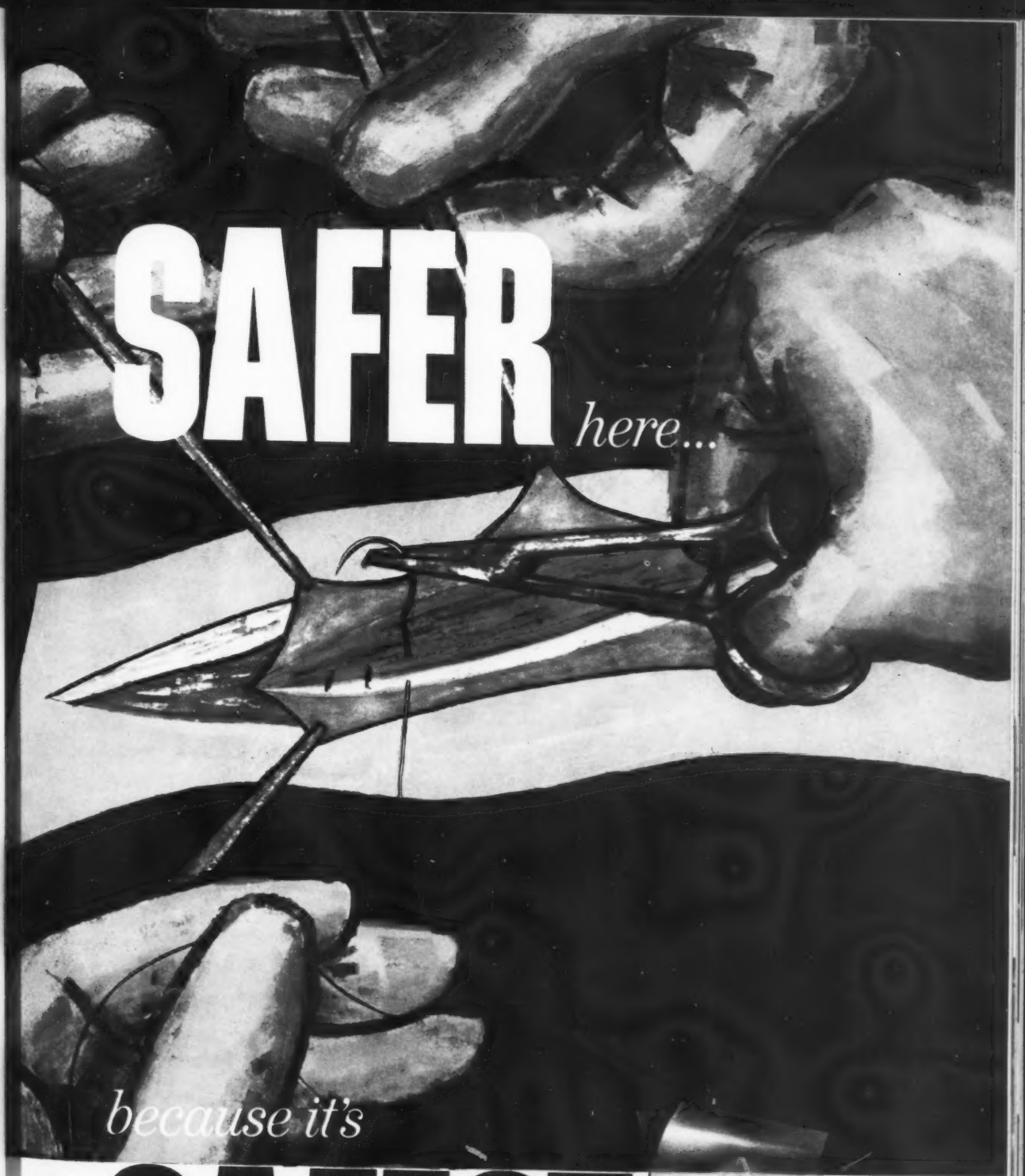
"All medical and hospital services including rehabilitation services are provided to all without cost. Even burial expenses are included."

* * *

Dental Insurance Milestone. Local 14-149 of the Oil, Chemical and Atomic Workers International Union, AFL-CIO, is the first industrial union to obtain nonprofit dental insurance for its members, through collective bargaining with Helena Rubinstein, Inc. Coverage became effective November 1, under Group Health Dental Insurance, Inc.

Anthony Mazzocchi, union president, noted that his members had found dental expenses such a burden that many of them limited their dental care to emergency visits for toothache or breakage.

The plan provides that employees may use their own dentists. It pays benefits to any dentist anywhere in the world. Over 4,100 dentists in the metropolitan New York area—more than one out of three—participate. They accept GHDI allowances as full payment for subscribers with annual family incomes of $5,000 or less. A subscriber whose family income is more than $5,000 pays the difference between the plan's allowances and the dentist's charges. Benefits are comprehensive and include the most frequently needed dental services.



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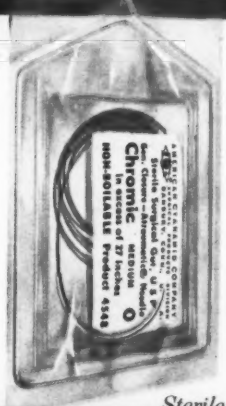

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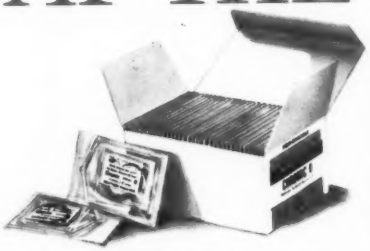

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Central Supply—Nerve Center of the Community Hospital

By John H. Gorby*

Another in a series on hospital organization, based on lectures given at meetings of the Association of Western Hospitals and allied state groups

• Central sterile supply service offers the community hospital the kind of savings usually associated with elimination of duplication and related inefficiencies. Its principal function is the furnishing, as needed, of sterile supplies and equipment.

In a few remaining hospitals, certain departments maintain their own sterilizing apparatus, but by far the more common practice today is to have a single sterile-supply unit to service the chief requirements of the operating room, the delivery suite, the nursing units, and other areas of the hospital.

Modern sterilizing technics call for more space than is generally available in the immediate operating-room area. Although operating rooms seldom have enough space for major autoclaving equipment, they do require a sterilizer for the quick sterilization of some essential instrument which may have become contaminated while in use, especially if a heavy volume of surgery is scheduled.

Functions of the central sterile supply department and those of the operating rooms and other units should be thought of as separate and distinct. Even though the operating rooms may have equipment for sterilizing instruments, there is no need for them to sterilize linens, gloves, dressings, and other surgical supplies as well. The provision of all linens, including drapes and packs, for surgery and the delivery suite, as well as all sterile items for the various nursing units, should be the responsibility of the central sterile supply department.

ADVANTAGES

There are substantial advantages to having such a department. It reduces over-all inventories of such supplies and equipment as syringes, needles, and solutions. Furthermore, with the concentration of specialized personnel and equipment possible in a central unit, such materials as treatment trays, oxygen equipment, intravenous solutions, and sterile packs for nursing units and delivery and operating rooms can be made ready and sterilized more quickly and more dependably than when the sterilization procedure is decentralized among the various units.

LOCATION

Local and individual circumstances determine the administrative relationship of central sterile supply to the nursing service or the general supply service.

Although the central sterile supply department began as an adjunct to the operating rooms, experience has indicated that it may also be located near the laundry and general stores without decreasing its effectiveness. In fact, when it is so located, it is possible to centralize all supply activities. Easy accessibility to freight and passenger elevators is an important consideration.

For most efficient handling of supply distribution, hospitals are finding a regular messenger service effective. Under this system, each floor or nursing station should know at approximately what time the messenger will call. Requisitions should be ready for him to pick up. After the requisitions are filled, delivery is made of all except extremely bulky items.

ACCOUNTING PROCEDURES

A hospital's central supply room can be one of its major income-producing areas. Medication trays, catheter trays, enemas, oxygen equipment, syringes, and practically all equipment in use at the hospital originate at one time or another from this department. All orders for equipment to the central service area should be on valid requisitions and should bear the signature of someone authorized to make a requisition.

Pricing of requisitions is usually done by the department. Requisitions are then sent to the business office for posting to the patients' accounts. Other items may be charged to the nursing-service department, the operating room, the delivery suite, or whatever unit requisitioned the material.

Some central supply services have adopted a peg-board system. This provides an excellent method of maintaining a simple, easy-to-use charge system.

(Continued on next page)

*1816 Lincoln Ave., San Diego 3, Calif.

When the requisition is brought to central supply, the patient for whom it is intended or the department requisitioning it is charged for the material. Charges are recorded by means of a duplicate, pre-numbered set of strip tickets which may be detached after they have been completed. The original goes to the business office for charge to the patient or department; the duplicate remains in the department for a period of time established under administrative procedure.

STAFFING

Central sterile supply may be directed by the superintendent of nurses, by a nurse responsible to her, or even by the hospital administrator. It has also functioned as a branch of the pharmacy. In some hospitals the central sterile supply supervisor reports to the operating-room supervisor, but such an arrangement is to be discouraged, because it is apt to result in inadequate attention to the needs of the nursing units.

A typical central supply room will be staffed with from five to eight nonprofessional employees, generally under the direction of a registered nurse or someone skilled in the preparation of sterile supplies.

According to detailed studies in several hospitals, a ratio of one employee to each 30 beds, or multiples thereof, seems to provide adequate staffing for a complete sterile supply service for an entire hospital. The service does not include cleaning and sterilizing the instruments of either operating rooms or delivery suites. The proportion given also allows for development and use of a standard cart or tray system for each nursing unit.

SHIFTS

A small central sterile supply unit may have to run two or even three shifts. A single shift may suffice if there is enough space as well as sufficient vertical transportation. Of course, a single shift substantially reduces the amount of supervisory personnel needed.

However, in any hospital with more than 50 or 60 beds, the central supply room should be open at all hours so that equipment may be obtained when it is needed. In smaller hospitals 24-hour coverage is not so important, as generally the nurse in charge has a key and may in an emergency get the required equipment or solutions.

Generally speaking, hospitals with more than 60 beds maintain their central service areas on a 24-hour basis. The larger the hospital, the greater the need for around-the-clock service. If the hospital maintains a blood bank, it is frequently found in the central supply area. It is essential that there be prompt access to whole blood at all times.

SUPERVISION

In the average community hospital it is probably sufficient that a nurse be in charge of the central supply department during the daytime only. If a reliable, well-trained crew comes on in the evening, it is acceptable to permit these people to perform routine tasks without the direct supervision of the central supply supervisor. Such supervision as may be required can be given by the nurse in charge or someone else in authority.

Ordinarily a central-service department uses afternoon and evening periods to wash, dry, and powder gloves, to clean syringes and needles, and prepare them for autoclaving or, in some cases, actually to autoclave packs for the next day's use.

PACK PREPARATION

Every pack prepared for use should have a heat-sensitive chemical indicator inserted in it. Such a device turns color after proper sterilization, indicating the pack has been autoclaved. Another indicator of sterilization is found in available heat-sensitive tapes which are placed on the outside of each pack.

In addition, the laboratory should run a culture at least once a month or oftener on a test tube inserted in the autoclave, to make certain that the heat is intense enough to kill all pathogenic organisms. Results of these tests should be logged in the records of the central service area.

EQUIPMENT

For a hospital of 50 to 75 beds the central sterilizing and supply room should be at least approximately 20 x 25 square feet. The area should be well lighted and have work space and benches around all sides of the room.

A minimum requirement should be a 24″ x 36′ dressing sterilizer. There should also be a small water still with a capacity of at least five gallons an hour.

On one side of the room there should be a space for washing items to be processed. There should be generous work space for inspections and for assembly of packs on a large table in the center of the room, and storage space for sterile supplies around the perimeter of the room.

A glove-drying rack may be adequate for a small hospital, but a larger hospital will probably use a glove-conditioning machine.

Besides the dressing sterilizer there should be a hot-air sterilizer at least 18″ x 14″ x 14″. Adjacent to the area should be a storage room for unsterile supplies and equipment.

In a hospital of about 100 or 125 beds, the central sterilizing and supply room should be at least 30′ x 20′, or 600 square feet. Many hospital administrators fail to realize that this is perhaps the most important area in the hospital. It should have adequate work space with good ventilation and lighting. An error in procedure in this department can result in patient infections with liability to the hospital.

A hospital of 100 to 125 beds should have two dressing sterilizers, one 24″ x 36″, besides a water still, glove-drying equipment, a hot-air sterilizer, and the usual other equipment.

BULKY ITEMS

In a hospital of 100 beds or over, large quantities of intravenous solutions are used, generally in the 1,000-cc. size bottle. Whether the hospital prepares its own solution or buys it, the bottles are still bulky and somewhat difficult to handle.

One hospital in the West set up an ingenious system of chutes on a slight incline. The chutes, just large enough to hold either a 500-cc. or 1,000-cc. bottle, are only four or five inches wide. Running along the wall, they take up very little space.

Starting at a small balcony in the rear, these chutes are periodically filled as the use justifies. Normally two or three days' supply of solution is contained in a chute at one time. The chutes save time and simplify the handling of this otherwise bulky material.

A similar method of handling large quantities of bulky items such as 3 x 3 and 4 x 4 sponges was adopted at the same institution. A chute leads from the balcony at a sharp incline so that the packages of sponges are fed by gravity. This arrangement also saves considerable storage space. Bulk supplies may be stored on the balcony, and chutes periodically refilled as demand justifies.

It has been said that a well-planned central service department can store five or six times the amount of supplies as one not properly designed and carefully organized.

COORDINATION WITH LAUNDRY

Laundry personnel should be trained to fold sheets and other linens so that central supply department personnel will not have to repeat the operation when assembling linens for sterilization. Delegating this task to laundry personnel will save time and space and make for less stirring up of lint and linen particles in the central supply department.

Coordination with the laundry will also free central supply department personnel for more essential work, such as cleaning, packaging, and sterilizing surgical instruments and equipment for the operating room and delivery suite.

TRAYS

Special treatment trays—sometimes as many as 70 different kinds—are maintained in some central sterile supply units. Each includes needles, syringes, hemostats, ABD's, and other items. They are usually prepared in advance and kept on hand.

Compresses and other types of dressings, of course, are used and thrown away. But treatment trays, for the most part, consist of nonexpendable items and must be returned to central sterile supply after use.

SUPPLY CARTS

Some nursing units maintain floor stocks of dressings, trays, adhesive tapes, and other items not normally charged directly to the patient. Smaller stocks may be maintained if a standard tray or sterile supply cart is supplied to the nursing unit by the central sterile supply department.

Much time is lost in the central sterile supply department when there are no standard supply stocks in the nursing units and no standard supply tray. There is a constant flow of requisitions for supplies. By setting up standards, a hospital can cut down sig-

(Continued on next page)

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nificantly the number of requisitions to central sterile supply.

Studies indicate that 20 minutes a day on each nursing unit is more than adequate for the preparation of central sterile supply requisitions. In addition, 25 minutes per nursing unit are spent by central sterile supply to process and cost requisitions. Personnel of nursing units spend an average of 42 minutes a day traveling back and forth to central supply if there is no delivery service and they have to make supplemental or emergency trips for supplies.

All sterilizing for the floors can be done in the central sterile supply department if the standard cart method is used. A standard daily list of sterilized items needed is developed for each unit, and a cart containing all sterile items is kept in the unit. Central sterile supply personnel pick up and restock this cart, usually at night. When restocking is done by the night shift, there is easier and more rapid access to elevators during the busier daylight hours.

SUPPLY STANDARDS

Other advantages of the cart system include standard quality of sterilization, avoidance of detailed order-writing by nurses, controlled processing and costing of central sterile supplies, and reduction of elevator travel during the day.

Simple steps can be taken to develop supply standards, whether for an inventory maintained on each nursing unit and filled at regular intervals by the central supply department, or for a cart or tray.

First, record the amount of sterile items used in each nursing unit for approximately two months. It may be necessary, in large hospitals with many medical, surgical, obstetrical and other nursing units, to be guided by the experience of one unit in each category.

Second, note for each item the number ordered by the nursing unit and the number returned after use.

Third, note which items are ordered frequently, occasionally, and rarely.

Fourth, verify with nursing personnel which items may be necessary, even though used rarely, in order to decide which should be included on the standard tray and which should be stocked on the floor or held in reserve.

Fifth, set up specific standards for each division, such as medicine, surgery, and obstetrics.

Finally, after tentatively agreeing on standards for each specific area, set up trays for about two weeks in a typical nursing unit of each area. This pre-test may indicate the need for adjustments in the final tray set-up.

It is helpful for each type of tray or cart to have a fixed layout of items. Keeping the layout consistent will simplify loading, checking for completeness, and locating of items by nurses when they are needed.

Changes in case load and medical requirements will, of course, require modifications of established standards. Periodic reviews will help keep the standards relative to actual needs.

Accounting work done by central sterile supply and the business office can be reduced considerably by the use of standards. Pre-established amounts can be charged to nursing units each month. The need to price individual items is thus eliminated. Inventory control is simplified. Clerical work otherwise required in central sterile supply may be eliminated.

RELATION TO PHARMACY

The pharmacist and the central-supply supervisor should work very closely together, because they have allied problems. Some of the bulkier items that normally would be dispensed from the pharmacy—intravenous solutions, for example—may be obtained from central supply.

Visiting salesmen will bring to the hospital new ideas and new trends in equipment and procedures. The central-supply supervisor can spot items worthy of further investigation and advise the administrator or the purchasing agent.

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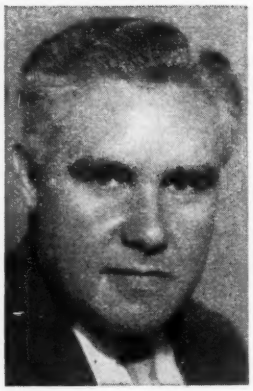


By John G. Steinle

Consultant's Corner

Q. How much does air conditioning add to the cost of a new hospital?

A. This again is a difficult question to answer categorically. There are a number of factors that affect the cost. However, it can generally be estimated that air conditioning will add approximately 10 percent to the cost of construction.

Q. We are making a study in our community to determine: (1) the number of disabled, and (2) those in this number that are feasible for rehabilitation. Do you have any recent statistics on such studies?

A. A study is now under way in Kansas City. When this study is completed, 8,300 households, representing about 27,000 people, or five percent of the population of greater Kansas City, will have been interviewed. A preliminary report at about half-way in this survey indicated that 46.3 percent of the 17,000 persons covered had chronic conditions that had exsisted three months or longer. It also said that 5.2 percent of the population had handicaps. Of these persons, 65.7 percent are feasible for rehabilitation; and 40 percent could be rehabilitated for remunerative employment in the following categories: competitive, 20 percent; sheltered, 15 percent; homebound, one percent. Of those feasible for rehabilitation, six percent are over 65 years of age, 39 percent are under 18 years of age, and four percent are housewives.

Q. Have you developed laboratory time standards similar to those that you recently reported for x-ray?

A. I reported general laboratory time standards, based on a study of 40 hospitals, in this column, July, 1957. These standards are:

Studies of 40 hospitals of various sizes indicate, as a norm, the following number of procedures per technician by specialty, per month—

Bacteriology	1,050
Chemistry	1,300
Serology	1,900
Hematology	1,200

The chemistry technician should be able to perform 1,300 procedures in a month. If a technician works in more than one area, the norm can be computed on the basis of the average number of minutes required to perform each test. Assuming 9,600 working minutes in a month for a 40-hour week, the following is the average time per procedure—

Bacteriology	9.1 minutes
Chemistry	7.4 minutes
Serology	5.0 minutes
Hematology	8.0 minutes

Consequently, a single technician performing 150 bacteriology examinations, 500 chemistry examinations, 300 serology examinations, and 200 hematology examinations in a month, can be compared to the norm as follows—

150	× 9.1 minutes	=	1,365 minutes
500	× 7.4 minutes	=	3,700 minutes
300	× 5.0 minutes	=	1,500 minutes
300	× 8.0 minutes	=	2,400 minutes
	TOTAL		8,965

This is within 15 percent of the total work time of 9,600 minutes, and is quantitatively satisfactory. To evaluate quality of performance, however, the only method is a periodic check of results.

Now, we have available more detailed data resulting from an intensive study in a specific hospital laboratory. These data are as follows:

Standard Time Data For Routine Examinations

Examination	Unit	Standard Time Required Per Unit (Minutes)	Units Produced Per Hour
Routine Hematology			
Cell Volume	1	2.37(a)	25.3
Hemoglobin	1	2.61(a)	23.0
Red cell count	1	5.80(c)	10.3
White cell count	1	3.69(c)	16.3
Differential cell count	1	6.14(c)	9.8
Urine Laboratory			
Urinalysis	1	3.70(b)	16.3
Chemistry Laboratory			
Blood sugar	1	3.17(a)	19.0
Urea clearance	1	8.24(a)	7.3
Urea (blood)	1	4.42(a)	13.6

(a) Process allowances of 10 percent were allowed for these tests.

(b) Process allowances of 15 percent were allowed for this test.

(c) Process allowances of 20 percent were allowed for these tests.

Unlike the 40-hospital survey which averaged out individual hospital differences, the data in the above table were derived from time studies of actual operations in a given laboratory. Thus, differences in test method and in physical layout of the laboratory would somewhat affect these results. However, they can be used as guides with these limitations kept in mind.

Review of Hospital Law Suits

By Leo Parker,
Attorney at Law

• Aggressor is Killed

• Recently, a higher court rendered an unusual decision to the effect that if an employee hits a fellow worker who then kills the employee who started the fight the dependents of the deceased employee can receive compensation under the State Workmen's Compensation Act.

In Stewart v. Chrysler Corporation, 87 N. W. (2d) 117, it was shown that during an argument an employee named Stewart hit a fellow worker who then killed Stewart.

Stewart's widow sued to recover compensation under the State Workmen's Compensation Act. In this case, the higher court awarded compensation to Stewart's widow, and said:

"Certainly to hold that no matter what provocation and angry words there might have been between the parties, he who struck the first blow would be denied compensation would be neither reasonable nor in accordance with sound principles. The striking of the first blow is not the sole ultimate test as to whether the injury arose out of the employment."

ATTEMPTED SUICIDE LIABILITY

A higher court has rendered an interesting decision which clearly answers a legal question recently submitted to me by an official of a hospital corporation. The question was this: If an attending physician of a mentally ill patient failed to specifically instruct the attendants of a hospital to guard the patient, can the hospital be held liable in damages for injuries sustained by the patient when he attempted to commit suicide?

In Clements v. Swedish Hospital, 89 N. W. (2d) 162, the testimony showed these facts: Mrs. Clements sustained injuries in an automobile accident for which she was given care and treatment at Minneapolis General Hospital. After returning to her home from that hospital, she was hospitalized in the Swedish Hospital, at the direction of her physician, for the purpose of receiving care and treatment for her injuries resulting from the automobile accident. No mention was made of any mental disturbance or distress afflicting her. She was later examined by Dr. Wohlrabe and, by his order, she was given bathroom privileges. No special care was prescribed for her.

During the following day, she appeared nervous and apprehensive over her condition. At 8 p.m., while the nurse was with her, she removed a scissors from the nurse's pocket and said that she "didn't want to die." The nurse quieted her, persuaded her to go to bed, and recorded the incident in her notes on the patient. At 8:30 p.m. she was visited by Dr. Wohlrabe, at which time the nurse's records were available to him. He recorded in his progress notes for that visit that Mrs. Clements exhibited depression and possible hallucinatory ideas. He did not order any special treatments for her at that time and his order that she have bathroom privileges remained in effect.

A few days later Mrs. Clements jumped from a window and sustained serious injuries. Mr. Clements sued the Swedish Hospital for heavy damages contending that, in view of the fact that his wife was irrational, the hospital's attendants and Dr. Wohlrabe were negligent in failing to place restraints on his wife or otherwise to confine or restrict her from having access to the window from which she jumped. The higher court refused to agree with these arguments and, in holding Mr. Clements not entitled to recover damages from the Swedish Hospital, said:

"There was nothing to indicate that plaintiff (Clements) was contemplating suicide. True, she acted in a peculiar manner and talked irrationally at first, but the nurse's reports, as well as the doctor's progress reports, indicate that she was less apprehensive, was more cheerful and cooperative, and seemed very happy. To hold that under such circumstances the failure of the hospital attendants to apply restraints or to take other steps to restrict or confine her upon their own responsibility constituted negligence would place too heavy and dangerous a burden upon the attendants employed by a general hospital."

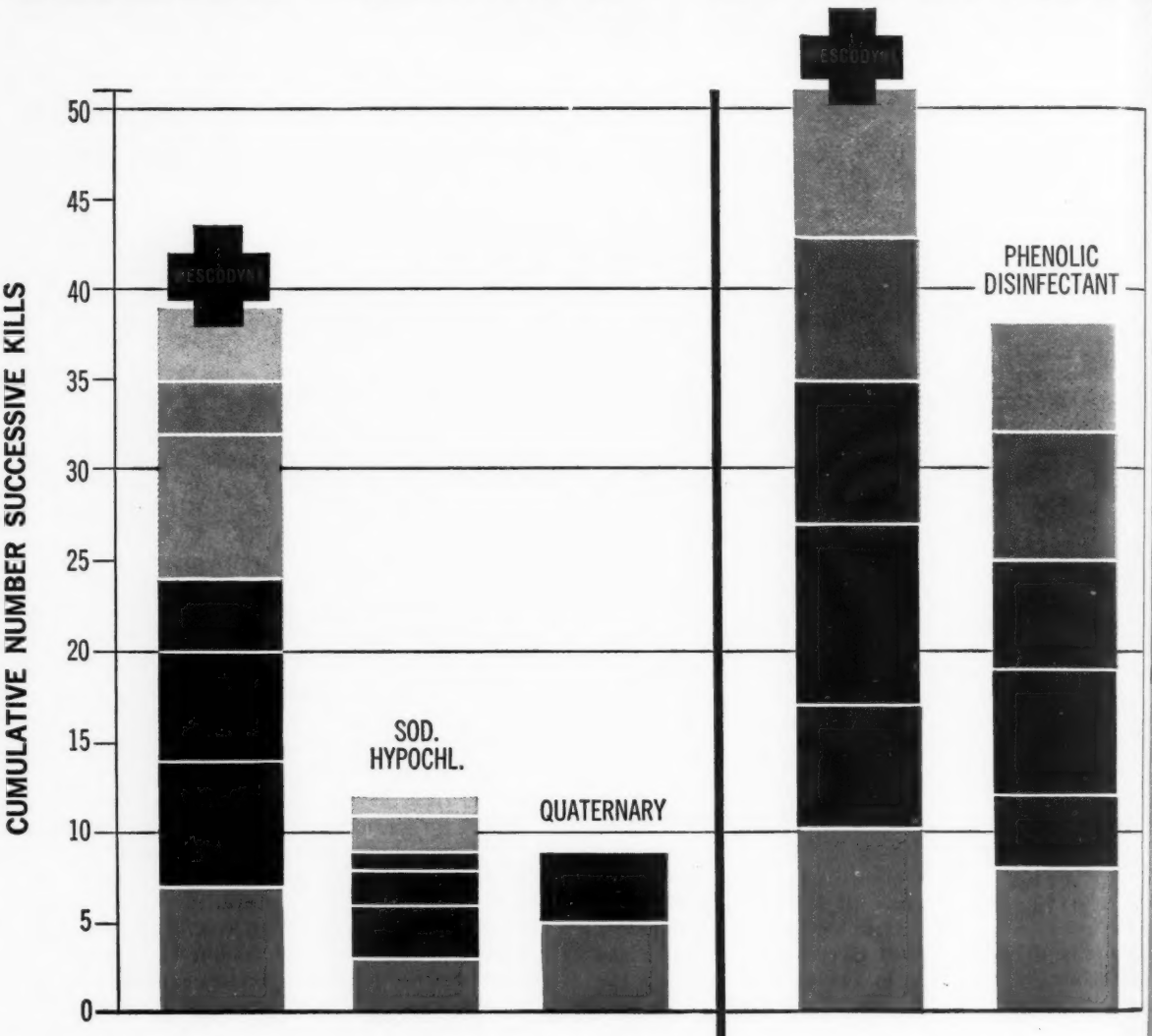
This higher court went on to explain that when a patient is admitted to a hospital merely for the treatment of injuries sustained in an accident and nothing is said as to any mental disorders afflicting such patient, it can scarcely be said that a question is present as to the hospital's negligence. In this respect, the court said:

"The hospital is not equipped with portable window bars or cages for the restraint of mental patients. There are no locks on the windows. If a patient manifests suicidal tendencies, a report to such effect would be made to the patient's doctor, and the hospital employees would carry out his instructions in the case."

For comparison, see St. Luke's Hospital Association, 194 Minn. 198, 259 N. W. 819. In this case, a patient had entered the hospital because of a nervous and

(Continued on page 64)

TESTS SHOW GREATER



Capacity Test for Germicidal Action. (A. Cantor and H. Shelanski as described in Soap and Sanitary Chemicals, February 1951.) **Explanation:** This method essentially consists of adding to the use-dilution of the disinfectant or sanitizer, successive doses of a 50/50 mixture of milk plus broth culture of test organisms. These doses are added at ten minute intervals. Thirty seconds after each addition, a transfer is made into broth containing a suitable inactivator. This method makes it possible to determine the capacity of a germicide to kill before the microorganisms and organic contamination have exhausted its germicidal action. **Organisms:** Salmonella typhosa, ATCC #6539; Micrococcus pyogenes. var. aureus, ATCC #6538; Salmonella pullorum, ATCC #9093; Pseudomonas aeruginosa, ATCC #8689; Trichophyton interdigitale Emmons 640, ATCC #9533; Penicillium luteum, ATCC #9644; Saccharomyces cerevisiae, ATCC #10274. **Dilutions:** WESCODYNE: 1:320 (50 ppm available iodine); Sodium hypochlorite: (100 ppm available chlorine); Quaternary: (50%) 1:5,000 (200 ppm active ingredient). **Temperature:** 15°C. **Media:** Fluid thioglycolate medium, USP XIII was used for testing WESCODYNE and sodium hypochlorite "Letheen" broth was used for testing alkyl dimethyl benzyl ammonium chloride.* All tests were re-subcultured in the same medium. **Results:** See above chart. **Conclusion:** The cumulative number of successful kills shows WESCODYNE to be over three times more effective than the nearest material tested.

*Neopeptone dextrose broth was used for testing the alkyl dimethyl benzyl ammonium chloride against the three fungi.

Wescodyne vs. Leading Phenolic Disinfectant. (A. Cantor and H. Shelanski Capacity Test as described in Soap and Sanitary Chemicals, February 1951.) The method used in this test is the same as that used in the Capacity Test for Germicidal Action described at left. **Dilutions:** WESCODYNE: 1:213 (75 ppm available iodine); phenolic disinfectant: 1:100 **Temperature:** 15°C. **Media:** Fluid thioglycolate medium, U.S.P. XIII was used for testing WESCODYNE and FDA nutrient broth was used for testing the phenolic disinfectant. All tests were re-subcultured in the same medium to eliminate bacteriostasis. **Results:** see above chart. **Conclusion:** This test shows that the bactericidal effectiveness (in the presence of organic contamination) of WESCODYNE at a dilution of 1:213 (75 ppm available iodine) is greater than that of a leading phenolic disinfectant at a dilution of 1:100.

PATHOGEN COLOR KEY:

- Salmonella typhosa (typhoid organism)
- M. pyogenes v. aureus (staphylococcus organism)
- Salmonella pullorum (poultry disease organism)
- Pseudomonas aeruginosa (wound contaminent organism)
- Trichophyton interdigitale (athlete's foot type of fungus organism)
- Penicillium luteum (mold organism)
- Saccharomyces cerevisiae (yeast organism)
- Strep. pyogenes hemolyticus (streptococcus organism)
- Escherichia coli (enteric organism)
- Shigella sonnei (dysentery organism)
- Salmonella schottmuelleri (food contaminent causing dysentery)

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LAWSUITS

(Continued from page 61)

distressed condition, of which his attending physician and the hospital were aware. The record indicated that, on the third day after he was admitted, his talk became irrational and he had a wild glare in his eyes. An intern who had examined him reported that he appeared much depressed and seemed to be suffering under the belief that he had done something wrong. No restraints were placed upon him, nor were instructions issued that someone remain with him.

During the afternoon of the third day, he broke the glass in the upper half of the window of his third-floor room and jumped through it. The hospital was not equipped to handle mental patients. In deciding the hospital was not chargeable with negligence for failing to anticipate that the patient was contemplating suicide, even though the hospital attendants had recorded his peculiar appearance and behavior, the court said:

> **"As to the plaintiff's (patient's) condition, the attending physicians knew as much as, or more than, did the hospital authorities. They gave no instructions to apply restraints, nor did they direct that the bars be put on the window. The nurses and interns at a general hospital are charged with the duty of carrying out the instructions of the attending physician, except in cases of emergency. Such of necessity must be the rule. . . . There is nothing in the evidence indicating an emergency."**

——WHEN CITY IS LIABLE FOR WATER DAMAGE

An official of a hospital corporation asked this important legal question: Is the city liable for damages to valuable merchandise and foundation damage caused by a water main which broke and flooded the basement of the hospital?

Ordinarily a city is not liable in damages for injuries to persons and property caused by negligence of its officials and employees who perform "governmental" functions. The courts hold that governmental functions include services for which the city receives no pay or compensation, such as fire protection, garbage and sewage disposal, street repairs, and similar functions. On the other hand, the courts hold that municipalities are liable for damages caused by negligence of their officials and employees who perform ministerial functions. Ministerial departments are those operated by the city for profit, such as water, gas, electric, and similar departments.

For illustration, in the leading higher court case of Willis, 174 N. E. 686, the testimony showed that a water main broke and the water damaged property, including merchandise, in a basement.

The higher court refused to hold the city liable because no proof was given that the break in the water main was caused by negligence of the waterworks officials or employees.

For comparison, see Smith v. Boston Company, 129 Mass. 318. In this case, a property owner proved that the water pipes were not laid with reasonable and ordinary care. In view of this testimony, the higher

On our floor
WHY THAT'S THE ARTIFICIAL KIDNEY WE SAW IN THE MOVIE THE OTHER DAY!
YES, THAT'S THE PERMANENT PUMP-TANK UNIT WHICH HOLDS THE COIL FOR HEMODIALYSIS.
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WHEN IS IT USED?
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court held the city liable for damages caused by a break in the water pipe line.

Other higher courts have held that a city is liable for damages caused by a break in a water main, if the testimony shows that the waterworks officials had knowledge that the main was defective and failed to repair it promptly, or if the testimony shows that the water main had been in the ground for many years and the waterworks officials had neglected to examine it for defects.

On the other hand, as explained previously, a city is not ordinarily liable for damages caused by employees who perform governmental functions. For example, a city is not liable for injuries or damage caused by negligence of employees in its fire department. See Taylor Company v. City, 87 N.W. (2d) 401.

DOCTOR DEFRAUDS GOVERNMENT

Considerable discussion has arisen from time to time over this legal question: If an individual or official of a hospital corporation purchases surplus medical supplies and appliances from the United States at low prices and resells them at substantial profits, what is the penalty? Recently, a higher court answered this legal question clearly.

In United States v. Bound Brook Hospital, 251 Fed. Rep. (2d) 12, the testimony disclosed these unusual facts: Dr. Louis S. Borow purchased certain medical supplies from the United States. He purported to act on behalf of a nonprofit hospital corporation, the Bound Brook Hospital. Dr. Borow paid only five percent of the government's valuation of the medical supplies. All the supplies were resold by Dr. Borow to various purchasers at considerable net profit.

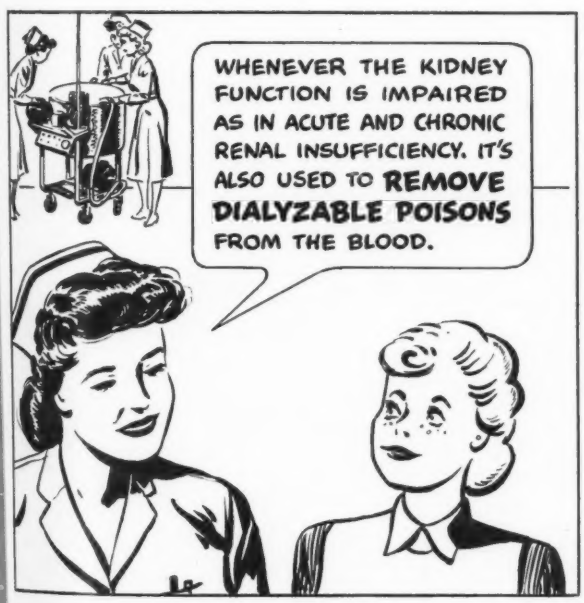
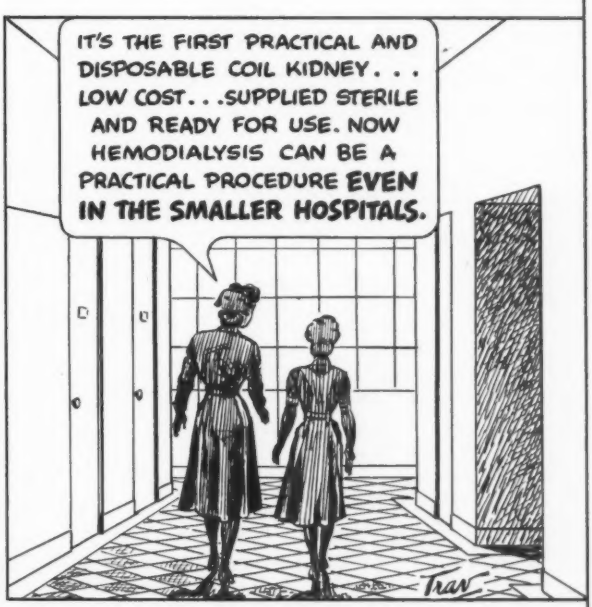
In subsequent litigation, the higher court held Dr. Borow liable to the United States for $2,000 plus twice the difference between the amount the government received from Dr. Borow and what he got from purchasers. This court said:

"It is conceded that the defendant (Dr. Borow) secured the supplies fraudulently and is liable for something. . . . There is no question that the United States has sustained an injury as a result of Dr. Borow's unlawful conduct. At the very least there was a loss in the defeating of the Government's program for applying the surplus material to beneficial social purposes."

This court went on to explain that Dr. Borow got medical supplies from the United States for about $2,000 which he resold for $34,000. Thus, he made a profit of $32,000. The higher court held that Dr. Borow must pay to the United States a total of $66,000. In this respect, the court said:

"In the present case we have the added factor that the defendant's fraudulent scheme involved obtaining the material at an exceptionally favorable discount, notwithstanding what could have been received for it from the general public. It is obvious that this conduct did cause a potential loss of money to the United States."

Obviously, Dr. Borow may be compelled to face criminal charges based upon defrauding the United States, in accordance with United States statutes.


WHENEVER THE KIDNEY FUNCTION IS IMPAIRED AS IN ACUTE AND CHRONIC RENAL INSUFFICIENCY. IT'S ALSO USED TO REMOVE DIALYZABLE POISONS FROM THE BLOOD.

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Personally Speaking

Eddie C. Allen—has been appointed to the new position of business manager, Kendall Hospital, South Miami, Fla. He was formerly credit manager.

Henry Aloway—has resigned as administrator, Tyler Holmes Memorial Hospital, Winona, Miss. He is succeeded by **James Townsend,** former member of the board of trustees.

Stephen L. Barrett—has been named assistant administrator, Middlesex Memorial Hospital, Middletown, Conn.

L. V. Bassham—has been appointed business manager, Midland (Tex.) Memorial Hospital.

Mrs. Lois Bickerstaff, R.N.—has been named director of nurses, and **Vaughan McClellan** has been named x-ray technician, Nassau General Hospital, Fernandina Beach, Fla.

Aleda Bos—has been appointed administrator, Greene County Hospital, Leakesville, Miss. She was formerly head, chemistry section, department of pathology, Mercy Hospital-Street Memorial Hospital, Vicksburg, Miss.

Paul Nicholson Bridge—has been appointed administrator, Halifax Community Hospital, South Boston, Va., succeeding **O. B. Ayers, Jr.** Mr. Bridge was formerly assistant administrator, Roanoke (Va.) Memorial Hospital.

Mrs. Lucile Williams Brown—has been assigned director of volunteer services, Thomas D. Dee Memorial Hospital, Ogden, Utah.

John Colby—has been named administrator, St. Luke's Hospital, Spokane, Wash., succeeding **Lawrence G. Trousdale** who resigned to become administrator, Davies County Hospital, Washington, Ind. Mr. Colby formerly was assistant administrator, Arnot Ogden Memorial Hospital, Elmira, N.Y.

Mrs. Harriet Arnold Craig, R.N.—has been appointed director of nursing service and education, Stamford (Conn.) Hospital.

Arthur V. Crandall—has been appointed administrator, Brackenridge Hospital, Austin, Tex. He was formerly administrator, Grandview Hospital, Edinburg, Tex.

Pat Dorsey—has been named manager, Ellensburg (Wash.) General Hospital, succeeding **Charles Knechtel** who resigned to become business manager, Yakima Valley School, Selah, Wash.

Charlotte C. Dowler—has resigned as administrator, Burien General Hospital, Seattle. She will continue as hospital consultant.

Joseph F. Farrell—has been named managing director, Germantown Dispensary and Hospital, Philadelphia, succeeding **W. T. S. Thorndike, M.D.,** who died recently. **Richard B. Wray** has been named assistant director.

John H. Fredericks—has been appointed business manager, St. Elizabeth Hospital, Yakima, Wash. He was formerly office manager of a Yakima business firm.

Francis Fillingim—has been named assistant administrator, Burge Hospital, Springfield, Mo. He recently completed residency work at St. Luke's Hospital, St. Louis, for his master's degree in hospital administration from Washington University, St. Louis.

John C. Gilbert, Jr.—has resigned as administrator, Bristol (Va.) Memorial Hospital.

Alvin Goldberg—has been named assistant administrator, purchasing agent, and director of safety, South Florida Baptist Hospital, Plant City, succeeding **J. C. Simonds, Jr.,** who has been appointed administrator, Louisiana Raulerson Hospital, Okeechobee.

Also at Baptist, **Mrs. Nell Delno, R.N.**—has been named assistant director of nursing. She was

(Continued on page 68)

Attending the U.S. Air Force Command Nurse Conference, Washington, D.C., November 13 to 14, were, left to right: 1st row—Lt. Col. Miriam R. Pierce, chief of nursing service, USAF Hospital, Andrews Air Force Base, Washington, D.C.; Col. Ida E. Peschon, command nurse, Wiesbaden, Germany; Col. Frances X. Lay, chief, Air Force Nurse Corps; Surgeon Gen. Dan C. Ogle; Col. Rosemary Hogan, command nurse, Langley Air Force Base, Va.; Maj. E. Lynne Christy, procurement branch, office of the Surgeon General; Lt. Col. Ruth R. Weidner, command nurse, Continental Air Command.

2nd row—Lt. Col. Rhoda Jahr, command nurse, Pacific Air Forces, Hawaii; Lt. Col. Martha Benston, chief nurse, USAF Hospital, Wright-Patterson Air Force Base, O.; Lt. Col. Dorothy N. Zeller, chief nurse, USAF Hospital, Elmendorf Air Force Base, Alaska; Lt. Col. Margaret E. Daniel, chief nurse, USAF Hospital, Offutt Air Force Base, Nebr.; Lt. Col. Mary E. Hoadley, command nurse, Scott Air Force Base, Ill.; Lt. Col. Evelyn A. Kelly, chief nurse, USAF Hospital, Eglin Air Force Base, Fla.; Lt. Col. Lucile C. Slattery, head, department of nursing, Gunter Branch, USAF School of Aviation Medicine.

3rd row—Lt. Col. Margaret E. McKenzie, 1002d Inspector General's Group, Norton Air Force Base, Calif.; Maj. Laura I. Tosi, chief nurse, USAF Hospital, Otis Air Force Base, Mass.; Lt. Col. Doris A. Kehoe, chief nurse, USAF Hospital, Maxwell Air Force Base, Ala.; Col. Claretta Evans, command nurse, Randolph Air Force Base, Tex.; Lt. Col. Myrtle N. Quamen, chief, nurse and medical specialist corps branch, Office of the Surgeon General; and Lt. Col. Ethel R. Kovach, deputy chief, Air Force Nurse Corps. The conference discussed such problems as hospital construction, procurement of nurses, nurse's role in disaster casualty control program, and present and proposed legislation pertaining to regular and reserve nurses.

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PERSONALLY SPEAKING

(Continued from page 66)

previously director of in-service training.

Norman H. Green—has been appointed assistant director, Faulkner Hospital, Boston. He was formerly assistant director, Springfield (Mass.) Hospital.

Wallace C. Haglund—has been named credit manager, Emanuel Hospital, Portland, Ore. He was previously in the general insurance field.

Frank C. Haythorn—has been appointed administrator, Fifth Avenue General Hospital, Huntsville, Ala. He was formerly assistant administrator, Anniston (Ala.) Memorial Hospital.

Jules M. Hinkes—has been appointed administrative assistant, Western Pennsylvania Hospital, Pittsburgh. He was formerly office and credit manager and director of admissions, Latrobe (Pa.) Hospital.

Howard T. Hoffman—has been appointed assistant administrator, Chester (Pa.) Hospital.

Gary R. Holdren—has been named assistant administrator, Mary Washington Hospital, Fredericksburg, Va., where he served his administrative residency after attending the school of hospital administration, Medical College of Virginia.

George W. Holman—has been appointed administrator, Union Protestant Hospital, Clarksburg, W. Va.

Virgil W. Jackson—administrator, Samaritan Hospital, Moses Lake, Wash., has resigned to become pastor of a Church of Christ in Wenatchee, Wash. He is succeeded by **Rodney E. Gannon** who was previously business manager, St. Elizabeth Hospital, Yakima, Wash.

Joseph M. Jaskol—has been named assistant administrator, Mountainside Hospital, Montclair, N.J., where he had been administrative resident after completing the University of Pittsburgh course in hospital administration.

Basil L. King—has been named administrator, Carter County Hospital, Elizabethton, Tenn. He was previously administrator, Copper Basin General Hospital, Copperhill, Tenn., where he has been succeeded by **Frank Wallace,** former assistant administrator, Knoxville (Tenn.) General Hospital.

Mrs. Esther K. Kupferberg, R.N.—has been appointed director of nursing services, Edgemoor Geriatric Hospital, Santee, Calif., where she was formerly assistant director of nursing services.

Bergliot Larsen—has resigned as administrator, Rogue Valley Memorial Hospital, Medford, Ore.

Margaret L. Larson, R.N.—has been appointed nursing supervisor, University of Washington Infirmary, Seattle. She was formerly assistant director of nursing, Pinel Foundation, Seattle.

Mrs. Verle Lesnon—has been appointed administrative assistant, Thomas D. Dee Memorial Hospital, Ogden, Utah. She is a graduate of the institution's School of Nursing and was director of nursing there from 1953 to 1957.

David A. Lopez, R.T.—has been placed in charge, department of physical medicine, Leflore Hospital, Greenwood, Miss. He was formerly with United Cerebral Palsy of East Central Mississippi.

L. Carl Marshall—has been appointed accounts manager, Sherman Hospital, Elgin, Ill., succeeding **Arthur Meyer** who has been appointed purchasing agent. Mr. Marshall was previously plant accountant, Hazel Atlas Glass Division, Continental Can Co.

John B. Mathews—has been appointed administrator, Wisconsin Neurological Foundation, Madison. He is a graduate of Washington University's (St. Louis, Mo.) hospital administration program.

(Continued on page 70)

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PERSONALLY SPEAKING

(Continued from page 68)

Ralph D. McGugan—has been appointed administrator, Greater Niagara General Hospital, Niagara Falls, Ont., Canada, succeeding the late **R. Ross MacKay.** Mr. McGugan was formerly assistant administrator.

E. Colton Meek, M.D.—has been engaged as full-time pathologist, Physicians and Surgeons Hospital, Portland, Ore. He was previously associate professor of pathology, University of Oregon Medical School.

John F. Mirabito—has been named assistant administrator, Meriden (Conn.) Hospital.

Olof T. Moline—has been named administrator, Porter Sanitarium and Hospital, Denver. He was previously assistant administrator, Hinsdale (Ill.) Sanitarium and Hospital, where he has been succeeded by **Raymond L. Pelton.**

Leslie C. Nash—has been named administrator, Ellsworth Municipal Hospital, Iowa Falls, Ia. He was previously administrator, Anne Jeffrey Memorial County Hospital, Osceola, Nebr.

Tom V. Olson—is serving an administrative residency at Swedish Hospital, Seattle, after graduating from the University of California in hospital administration.

C. Robert Peery—has been appointed assistant administrator, Roanoke (Va.) Memorial Hospital. He was previously administrative assistant, Mound Park Hospital, St. Petersburg, Fla.

Mrs. Emily Roberts, ADA—has been appointed dietitian, Monroe General Hospital, Key West, Fla.

Col. Ruth A. Robinson—has been sworn in as chief, Army Medical Specialist Corps. She succeeds **Lt. Col. Harriet S. Lee,** who has been assigned to the Army Medical Service Historical Unit, Walter Reed Army Medical Center, Washington, D.C. Col. Robinson was previously chief occupational therapist at Walter Reed Army Hospital, and is immediate past president, American Occupational Therapy Association.

Mother M. Rosalind, R.N.—has been named to succeed Mother M. Verenice as superintendent, St. Joseph Hospital, Flint, Mich. Mother Rosalind was previously director of nurses and director of the St. Joseph School of Nursing.

Harry V. Sanislo—has been named administrator, Burien General Hospital, Seattle. Mr. Sanislo was formerly administrator, Douglas Community Hospital, Roseburg, Ore.

Sister M. Leona—has succeeded **Sister M. Laurentia** as administrator, Mount Carmel Hospital, Pittsburg, Kans. Sister Laurentia has become administrator, Pratt (Kans.) County Hospital. Sister Leona was previously associate administrator, St. Joseph Hospital, Wichita, Kans.

Sister M. Roberta—has been named to succeed **Sister M. Etheldreda** as administrator, St. Joseph Hospital, Wichita, Kans. Sister Etheldreda will become adviser to the sisters on their hospital building and remodeling program.

Sister Mary—has been appointed administrator, Saint John's Hickey Memorial Hospital, Anderson, Ind., succeeding **Sister Petronilla,** who is now with St. Joseph's Hospital, South Bend, Ind. Sister Mary was previously assistant administrator, Mount Carmel Hospital, Columbus, O.

Sister Mary Louis, R.N.—has been named director, school of nursing, St. Vincent's Hospital, Bridgeport, Conn. She was formerly coordinator, Providence Hospital, Washington, D.C.

Bernard John Stormberg — has been appointed business manager, Sacred Heart Hospital, Medford, Ore., succeeding **Glenn Keyes.** Mr. **Stormberg** was previously employed by Bear Creek Orchards, Medford.

Lawrence Walker—has been appointed administrator, Davis Hospital, Statesville, N.C.

(Continued on page 73)

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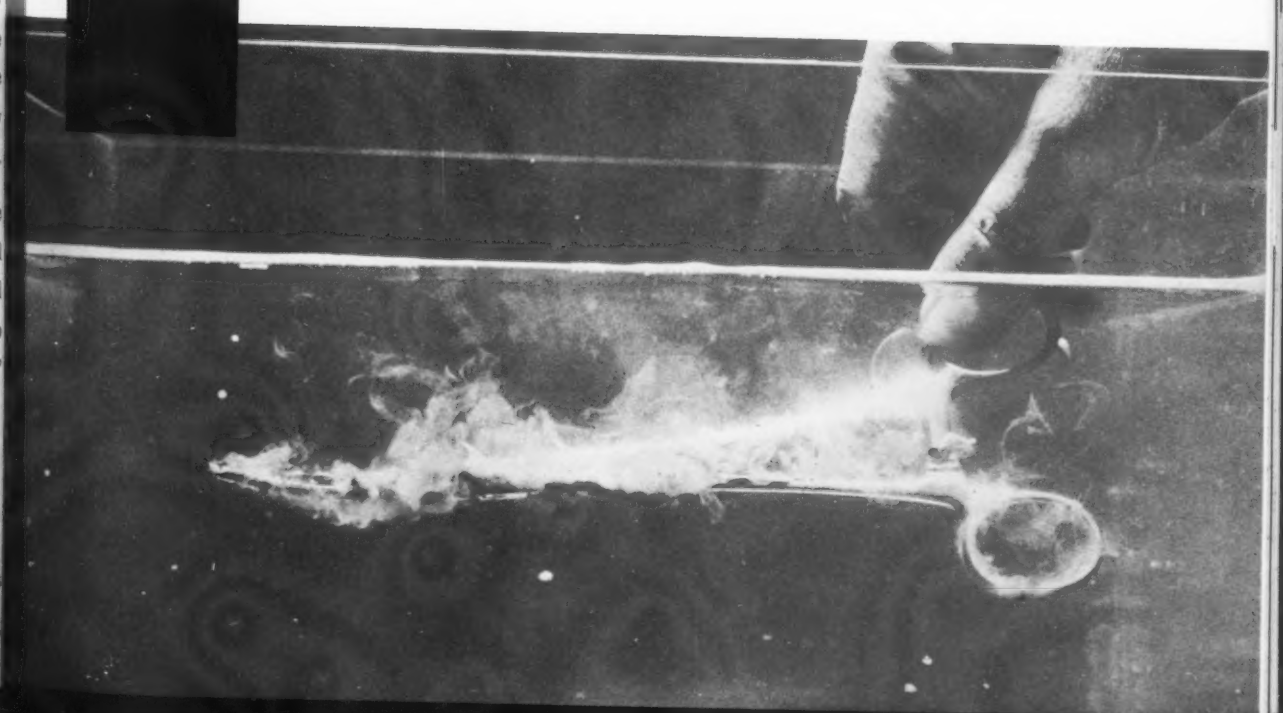

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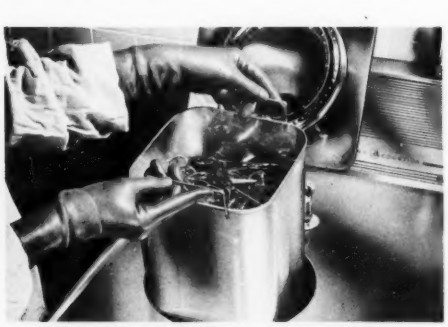

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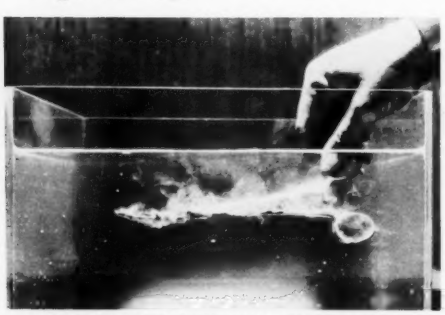

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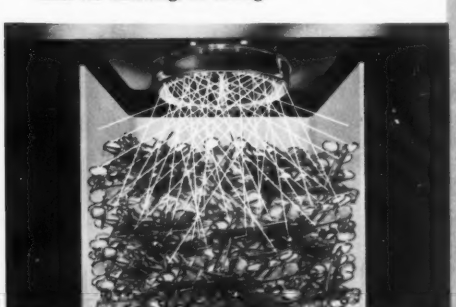

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PERSONALLY SPEAKING

(Continued from page 70)

C. E. Warren—has been named administrator, Athens-Limestone Hospital, Athens, Ala., succeeding **Thomas L. Qualey.** Mr. Warren is succeeded as administrator, Arab (Ala.) Hospital, by **Ruth Kennamer,** formerly bookkeeper.

Harry S. Whiting, M.D.—has been named acting head, Connecticut State Hospital, Middletown, succeeding **Edgar C. Yerbury, M.D.,** who has retired.

Bruce Yeats—has been appointed administrator, Tri-County Memorial Hospital, Deer Park, Wash., succeeding **Mrs. Irene Ciminera.** Mr. Yeats was formerly bookkeeper and credit manager, Klickitat Valley Hospital, Glendale, Wash.

VA Appointments

Walter Byrd—has been named manager, VA Center, Fargo, N. Dak. He is succeeded as assistant manager, VA Center, Jackson, Miss., by **Karl S. Nickle,** former assistant manager, VA Hospital, Alexandria, La.

Michael H. Travers, M.D.—has been appointed director of domiciliary homes for VA in Washington, D.C. He was formerly manager, VA Hospital, Fort Wayne, Ind.

New Officers

Mrs. Olive V. Wardrop, administrator, St. Mark's Hospital, Salt Lake City, was installed as president, Utah State Hospital Association, at the group's annual meeting, October 16 to 17, in Salt Lake City.

Other officers of the group are: **L. Brent Goates,** assistant administrator, Dr. Wm. H. Groves Latter-day Saints Hospital, Salt Lake City, president-elect; **Sister Louis Marie,** business manager, St. Benedict's Hospital, Ogden, treasurer; and **Ralph J. Nelson,** administrator, Tooele Valley Hospital, Tooele, member of the board of trustees for a 3-year term.

Ted L. Jacobsen, administrator, Morton F. Plant Hospital, Clearwater, has been installed as president, Florida Hospital Association, and **Arthur L. Bailey,** administrator, Orange Memorial Hospital, Orlando, has been chosen president-elect.

Joseph F. McAloon, administrator, Memorial Hospital, Hollywood, is the new secretary-treasurer; and **Don Laurent,** administrator, Memorial Hospital, Sarasota, and **Sister Mary Clare, R.N.,** administrator, St. Vincent's Hospital, Jacksonville, have been elected board members.

Leona Baumgartner, M.D., commissioner of health, New York City, became president, American Public Health Association at the conclusion of its 86th annual meeting in St. Louis, October 27 to 31.

Malcolm H. Merrill, M.D., director of public health, State of California, was named president-elect. Elected as vice-presidents were: **Abraham Horwitz, M.D.,** School of Public Health, Santiago, Chile; **F. Burns Roth, M.D.,** Deputy Minister of Health, Saskatchewan, Canada; and **Estelle Ford Warner, M.D.,** Albuquerque, N. Mex.

New executive board members are: **Wilson T. Sowder, M.D.,** State Health Commission of Florida, and **Milton Terris, M.D.,** School of Medicine, Tulane University. **Charles Glen King,** scientific director, Nutrition Foundation, New York City, was re-elected treasurer.

Sister Mary Esther, administrator, Our Lady of Lourdes Hospital, Pasco, was installed as president, Washington Conference of the Catholic Hospital Association of the U.S. and Canada. **Sister M. Antonia, R.N.,** administrator, St. Joseph's Hospital, Tacoma, was named president-elect.

Mrs. Matie Townsend, Cleveland, Miss., has been elected president, Mississippi State Nurses Association. Other officers are: **Dorothy Till,** Laurel, 1st vice-president; **Julia Finch,** Tunica, 2nd vice-president; **Sister Mary Remigus,** Vicksburg, secretary; **Evelyn Belknap,** Jackson, treasurer; **Grace Ferguson,** Tupelo, **Lillion Eno,** Jackson, **Mrs. Anna Musgrave,** Hattiesburg, **Mrs. Margaret Jagger,** Forest, board of directors.

Deaths

George A. Moore, M.D. — 79, founder of Moore Hospital, Brockton, Mass., died Nov. 3. He was a member of the Founders Group of the American Board of Surgery and a fellow of the American College of Surgeons.

Percy F. Riggs—53, administrator, Hollywood Presbyterian Hospital, and vice-president, Hospital Council of Southern California, died November 25. He had been on the staff of Hollywood Presbyterian for 23 years and had become administrator in 1956.

Monsignor Joseph B. Toomey—president-elect, Catholic Hospital Association of the U.S. and Canada, died November 10. Monsignor Toomey was also director of hospitals, Syracuse, N.Y., Diocese, and pastor, St. John the Evangelist Church, Syracuse.

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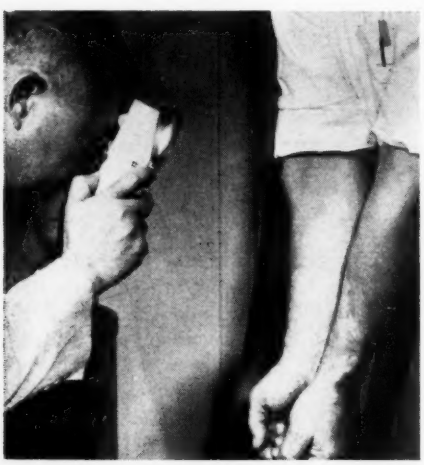
BUYER'S GUIDE

Ellen L. Davis

Buyer's Guide Editor

For further information on any of the products, please check the Buyer's Guide item number on the reply card opposite page 140.



900. Pinpoint vision camera

New Startech camera is designed for the physician who wants a quickly made record of lesions such as cuts and diseases of the skin. Outfitted with pinpoint vision, it is also suited for use in the laboratory for photographing cultures, small laboratory equipment, and other objects. Utilizing the light of tiny flash bulbs, the camera gives close-ups of the subject at a range of 4 to 16 inches. A single adjustment sets it for shooting, and double-exposure prevention is provided. Medical Division, Eastman Kodak Co., Rochester 4, N.Y.

901. Bandage scissors

Cutting away a tight bandage is often a painful procedure. These new bandage scissors lack the acorn-shaped protuberance found on the lower blade of ordinary scissors, coming instead to a smooth, rounded point only slightly longer than the upper blade. This allows cutting with the full length of both blades. The short cutting action goes through the toughest dressing without binding, or catching the skin or dressing. J. Sklar Mfg. Co., 38-04 Woodside Ave., Long Island City, N.Y.

902. Formometer

The formometer, which insures proper temperature of formula and food for infants, is cased in a clear, permanent, reusable container of polymethylstyrene which can be safely washed in automatic dishwashers, or sterilized in boiling water without distorting. It is held in place by grooves in the top and bottom of the container, and consists of a thermal tube, Pyrex dome, and a rubber nipple to hold the thermal tube suspended in the formula. Available in small and large sizes to fit standard bottles. Pratt Manufacturing Co., Inc., East Aurora, N.Y.

903. Iron-carbohydrate

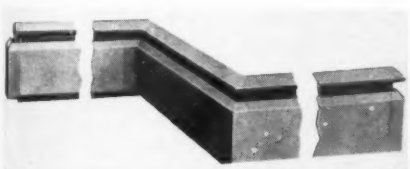
Astrafer, for the parenteral treatment of iron deficiency states, is a soluble high-molecular iron-carbohydrate complex. A departure from other iron salts, Astrafer does not irritate the intima; the clinical tolerance is unusually good since the iron is fixed to the carbohydrate radical; and, since it is administered via the intravenous route, beneficial effects of increased serum iron levels are accelerated. There is no incidence of pain along the vein following injection, no thrombophlebitis. According to clinical tests, between 70 and 100 per cent of the iron so administered is utilized in the synthesis of hemoglobin. Useful in late pregnancy; for replenishment of large iron deficits due to massive or repeated hemorrhage, or wherever a rapid accumulation of iron is needed. Ineffective in the management of anemias of polyarthritis or chronic nephritis. Astra Pharmaceutical Products Inc., Neponset St., Worcester 6, Mass.

904. Small surgical glove

A special small glove size has been added to the Rollpruf line of surgical gloves. Designed with narrow, shorter fingers, and snug-fitting wrists, the glove has the exclusive flat-banded cuff which prevents the glove from rolling down during use. Processed to eliminate the dangers of ozone cracking. Pioneer Rubber Co., Willard, O.

905. Butterfly rack

All-aluminum, lightweight butterfly rack, Model C-2209, is a new addition to the Cres-Cor line of hi-tensile food service equipment. Tray support arms are aluminum tubing which, because of their structure, give full support to the trays, yet are not totally deadweight. Removable by pulling them out of the socket supports formed by the corrugated frame upright; easily adjustable and replaced where required on 1½", 3", 4½", 6", 7½"or 9" centers by pushing them back into sockets until seated. Rack is 22¼" wide, 44¾" long, 67¾" high. Mobile on 5" rubber-tired wheels. Noncorrosive in high humidity; will not absorb odors, chip or peel. Crescent Metal Products, Inc., 18901 St. Clair Ave., Cleveland 10, O.

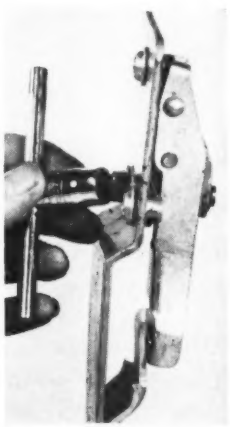


906. Baseboard heater

New electric baseboard heater installs in four easy steps. Heating panel comes in 2', 5', and 8' lengths, which can be flush-mounted or recessed against the studding. After desired lengths are selected, the back panel containing the heating element is screwed or nailed into studs. Power is then connected to UL-approved splice box by bringing in two wires from the rear, bottom or sides using raceway. The final step is snapping on end caps and corner pieces. Panels have a special bonderized finish which bonds paint tightly without a primer. Ilg Electric Ventilating Co., 2850 N. Pulaski Rd., Chicago 41, Ill.

907. Beaker

Heavy walled Diflouromer beaker handles almost every corrosive laboratory agent, can be heated continuously to 500°F. by any means, and contains extreme purity reactions without introducing trace contaminants. Unbreakable, easy to clean dry or sterilize. Edward Weck & Co., division of Sterling Precision Corp., 135 Johnson St., Brooklyn 1, N.Y.



908. Clamp

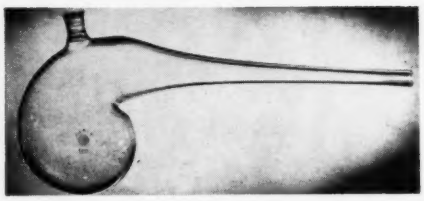
Container clamp for internal applications utilizes new worm-gear mechanism. Completely concealed within the container except for the hex screwhead used for opening the clamp, mechanism cannot be subjected to direct bumps, shocks or environmental extremes. Bassick Co., Bridgeport, Conn.

909. Bottle crusher

Powered by a ¼ H.P. motor, the Rescor bottle crusher accepts bottles and other glass objects up to 5" in diameter. The unit features a totally enclosed motor, impervious to the water needed to wash down the equipment. Extra heavy castings will withstand the impact of heavy glass bottles; the impellor, or glass breaker, is made of 30% carbon steel, and is guaranteed not to bend or break under hard usage. Rescor Industries, 18 W. Broad St., Mount Vernon, N. Y.

910. Cytological smear slides

A new slide for vaginal, cervical, and endocervical smears has been developed for use in a new technic designed to achieve the utmost diagnostic accuracy in making cancer screenings, hormonal readings, or microbiological classifications. Divided into three areas marked "V", "C" and "E", the end of the slide is frosted for handling and identification marking purposes. Use of the 3-way slide reduces the time of comparative study of the smears. When the smears are prepared separately on the VCE slide, it is possible to categorize inflammatory action as diffuse, or localized to any one of the three sites. Glasco Products Co., subsidiary of Owens-Illinois Glass Co., Toledo, O.



911. Tubulated retorts

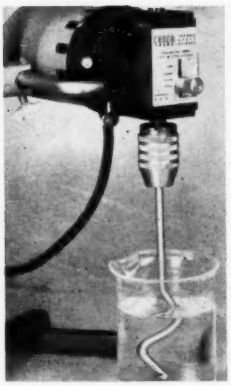
Two types of tubulated retorts, each in five sizes ranging in capacity from 150 ml. to 2,000 ml. Unstoppered retorts are tool-tubulated for use with rubber stoppers. Stoppered type comes with standard tapered pennyhead glass stoppers. Borosilicate glass with extremely low alkali content, blown with heavy walls for maximum resistance to thermal and physical shock. Mercer Glass Works, 725 Broadway, New York 3, N.Y.

912. Glove powder

Powdette is a specially prepared starch powder, laboratory tested for absorption by living tissues. Packaged in hermetically sealed individual packets. Available in counter-top cartons of 1,728 packets, or in bulk in sealed metal drums containing 25 or 30 lbs. Duxe Products, 205-15 Keith Bldg., Cincinnati 2, O.

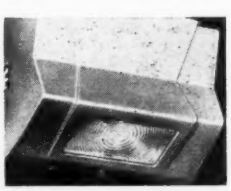
913. Training moulages

Colostomy training moulages are designed for demonstration and training for nurse and patient. Three moulages are included in the kit, simulating different types and conditions of the colostomy. These are of vinyl plastisol, and a sheet of foam vinyl under the molded skin provides realistic surface resilience. A base of styrene is shaped to fit a doll or human subject. A plastic water bag with flexible tubing connects to the inside of the stomae so that the colostomy may be irrigated by normal technics. Alderson Research Laboratories, Inc., 327 E. 102 St., New York 29, N.Y.



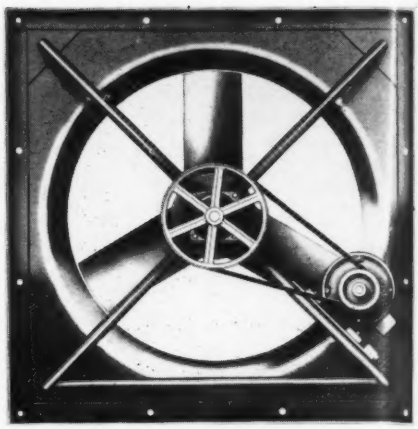
914. Stirrer

New laboratory motor stirrer provides consistent stirring action of highly viscous liquids at selectively controlled speeds from 100 to 1500 rpm. Has 3-jaw Jacobs' type chuck for quick change of metal or glass stirring rods. Operates on 115 volts A.C., 50/60 cycles. Central Scientific Co., 1700 Irving Park Rd., Chicago, Ill.



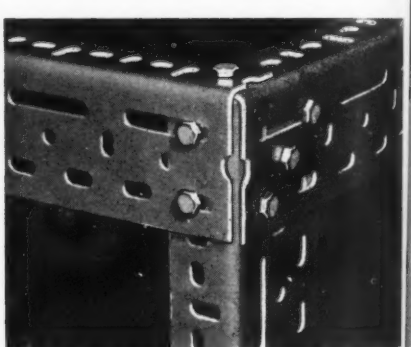
915. Fixture

Designed to provide soft, diffused illumination for patient reading or examination, light fixture takes 150-watt bulb in upper glass panel, 75-watt bulb in lower Fresnel lens. The two light units may be used independently or simultaneously. Available for wall mounting, or with cord for base plug use. Multi Electric Mfg., Inc., 4231 W. Lake St., Chicago 24, Ill.



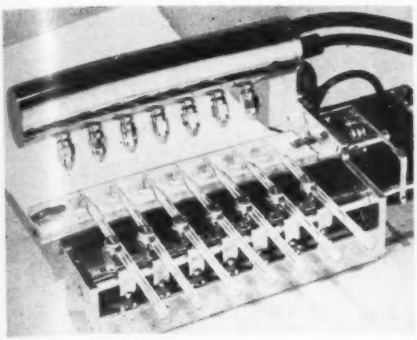
916. Propeller fans

A new line of Ventura propeller fans, Model IC, features an improved, high efficiency wheel configuration, and an expanded capacity range. Available in 42 different low pressure models with ratings up to 75,330 cfm at zero static pressure, or 71,740 cfm at ⅛" w.g. static pressure. High pressure fans, in 50 different models, have ratings up to 81,100 cfm at zero pressure, or 44,800 cfm at 1" w.g. static pressure. Photo shows the arrangement for fan sizes up to 72" nominal wheel diameter. American Blower Division, American-Standard, Detroit 32, Mich.



917. Equipto angle

Hot dip galvanized Equipto angle comes in 12 and 14 gauge weights, and 10' or 12' lengths. The steel product is punched with scientifically spaced holes and slots so that it may be cut to any desired length and bolted together to make storage racks, tables, guards, frames, carts, stands, ladders, and other items. Bolts and nuts are furnished, so the only steps are to cut the angles to length (a one-stroke cutter is available), and bolt them together. Instructions are packed with each bundle of 10 angles. Equipto, Aurora, Ill.



918. Chromatography applicator

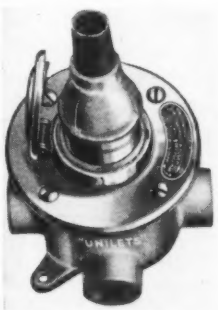
Especially valuable wherever relatively large samples must be controlled to a small point of application, the rocker arm control of the unit can be set so that tip of pipette touches paper 6, 12, or 18 times per minute. Rack holds up to seven pipettes, tips of which must be bent at right angles to allow precise application. Distance between successive points is 1 inch. Warm air from blower dries samples between successive applications. Paper is held in place by clear plastic cover with seven openings for sample application. Maximum width of paper accommodated is 9 inches. Scientific Products, 1210 Leon Place, Evanston, Ill.

919. Garbage can liner

An economical jumbo can liner made of thin wall polyethylene to fit the largest size 30-gal. can is made extra long to permit folding the top over the outside of the can. Possesses great wet strength, is greaseproof, leakproof, and odor tight. Can also be used as drum liner for chemical pharmaceutical and powdery substances with a saving in cost and time over made-to-order liners. Klean Kan Bag Co., 64 East 8th St., New York 3, N.Y.

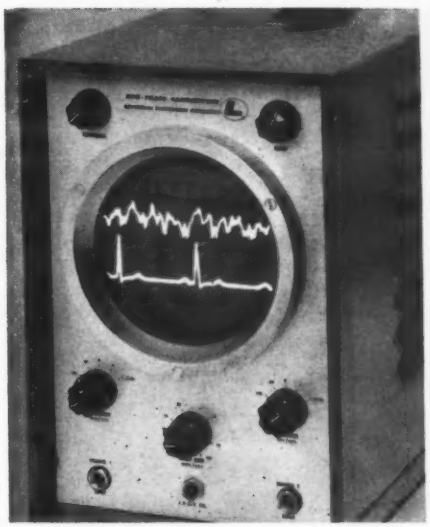
920. Cleaner

Heavy duty cleaner disinfects, deodorizes, and cleans in one operation, and is claimed to be especially effective in controlling the "Golden Staph." Can be mixed with hot or cold, hard or soft water. In 1-gal. glass containers. S. C. Johnson & Son, Inc., Racine, Wis.



921. Unilet

Device is an exclusive dead-end contact feature for CPS Series explosion-proof receptacles for flush-wall mounting. Any arcing in unit is confined within a plug combustion chamber of the dead-end receptacle. Dual protection is afforded by elimination of live contacts exposed to the atmosphere, which may contain volatile fumes or explosive vapors. Appleton Electric Co., 1701 Wellington, Chicago, Ill.

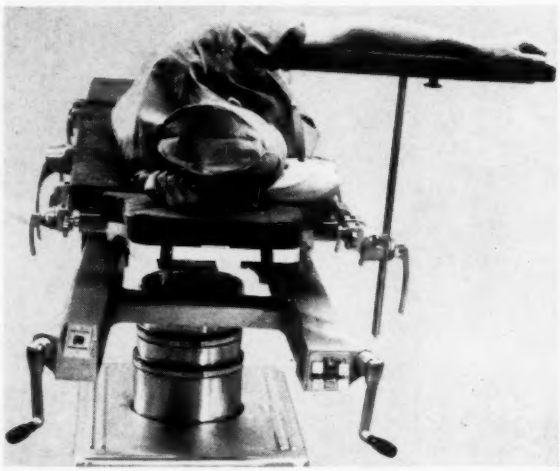


922. Medical scope

New Duo-Trace Cardioscope simultaneously displays two independent physiological signals. A typical application is simultaneous observation of electrocardiograph and electroencephalograph signals for monitoring anoxia in surgery. Other applications include recovery room and cardiac ward monitoring, cardiac catheterization, and phonocardiography. Displaying two traces on a 5", long-persistent screen, the instrument has a frequency range of 2,000 cycles per second; a continuously variable sweep rate of 7.5 to 100 mm. per second; a sensitivity of 330 microvolts per centimeter. Baseline stability circuits restore trace to the center of the screen one second after it has been driven off scale by an excessive artefact. Weighs 35 lbs.; operates on 115-volt, 50/60 cycle current. Levinthal Electronic Products, Inc., Stanford Industrial Park, Palo Alto, Calif.

923. Hi-Temp tape

Adhesive, pressure sensitive Time Hi-Temp Tape shows no aging, discoloration, or deterioration within a range of —70° to 550° F. For labeling objects associated with procedures involving oxidation, quality control, accelerated aging, discoloration standardization, plastic molding, electronic stability testing, atmospheric conditioning, acids, or alkalis. Will adhere to any surface; take pencil, ink, or ball point impressions. In 300" rolls of five widths, from ½" to 2". May be specially imprinted with any desired legend. Professional Tape Co., Inc., 355 Burlington Road, Riverside, Ill.

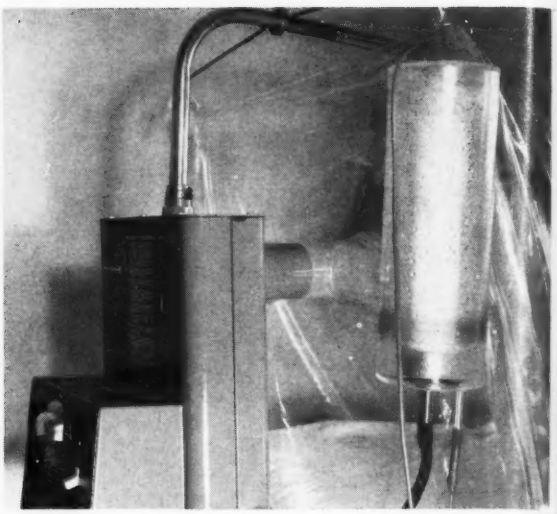


924. Stainless steel arm board

New style S-1576-W stainless steel arm board is easy to use, and versatile. Lateral adjustment permits the board to be placed under the full length of the arm, and also makes it usable for pediatric surgery. Height is adjustable from table top level to 20" above the table. Quick adjustment is obtained by a friction lock handle which controls the positioning of the supporting rod. The board rotates 360 degrees, and features a universal side rail clamp. Shampaine Industries, 1920 S. Jefferson, St. Louis, Mo.

925. Sterile disposable needles

Guaranteed sterile, pyrogen-free and ready for immediate use, the new Hypo disposable needle is claimed to be the only such item with a nickel-plated brass hub. The cannula is of stainless steel. Factory sharp needles assure smoother penetration. Packets are coded with the size of the contents, and clear-front package permits easy handling and access. Sizes include 20 x 1, 20 x 1½, 23 x 1, 25 x 5/8. Other sizes available upon request. Packed 100 individually packaged needles to a box, 10 boxes to a carton. Hypo Surgical Supply Corp., 11 Mercer St., New York, N.Y.



926. Porcelain humidifier

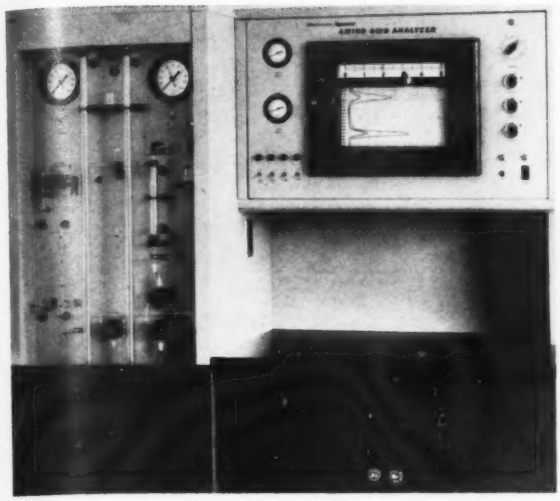
A cylindrically-shaped, plastic-encased porcelain humidifier which has 300 million pores per sq. in.—none larger than 75 millionths of an inch in diameter—produces moisture particles of only 3 to 5 microns when wet with distilled water, and oxygen is forced through its pores. This extremely fine fog eliminates the gagging and discomfort patients often experience when receiving therapy by conventional methods. System also provides a finer, more humidified atmosphere for oxygen tent therapy; produces a higher concentration of moisture to help liquefy lung secretions and keep the lungs functioning more efficiently. Selas Corporation of America, Dresher, Pa.

927. Polyethylene container

New 5-gal. size amber polyethylene container for storing and protecting photographic and other light-sensitive solutions for darkroom and laboratory use. allows the user to see content level. Air can be removed from the flexible container, and oxidation prevented by squeezing the air out and replacing the cap to form a vacuum chemical solution container. Clayton Chemical Co., Division American Photocopy Equipment Co. 75 E. Wacker Drive, Chicago, Ill.

928. Adjustable height bed

New adjustable height patient bed is operated manually, but can be converted to fully automatic operation by attachment of electric conversion unit. The 1493-PG Uni-Crank is operated by a single crank permanently attached to the foot of the bed. Fulcrumatic action simplifies the mechanical aspects of the bed, providing easy, smooth, silent action. Only 29 turns of the crank travels the bed its full 9" range for maximum high or low positions. Completely safety tested. Hard Manufacturing Co. 117 Tonawanda St., Buffalo 7, N.Y.



929. Amino acid analyzer

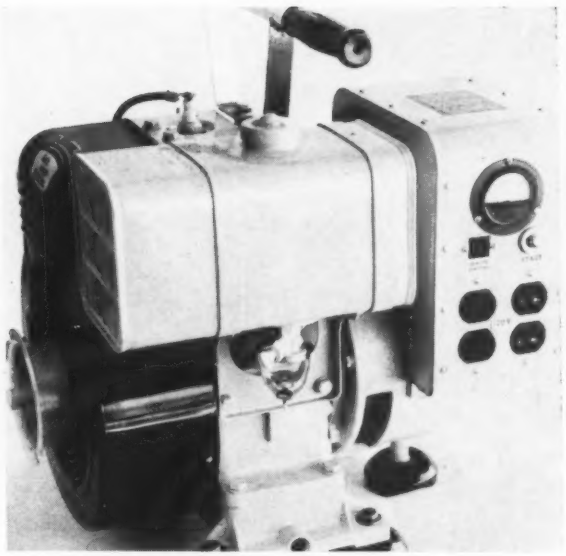
New unit quantitates and qualitates the 20 or more amino acids most commonly found in protein hydrolysates. Complete analysis of amino acids found in physiological fluids also may be performed in a 24-hour cycle. The entire process is virtually automatic. Amino acids are first separated by passing them through an ion-exchange column containing a special resin and buffer solution. Those passing from the column are continuously reacted with ninhydrin reagent to form a characteristic color. Optical density of the color is measured by a built-in colorimeter, and these values plotted by a multi-point recorder. Results, easily interpreted, are accurate within 3 percent. Spinco Division, Beckman Instruments, Inc., Palo Alto, Calif.

930. Multi-size stencils

New lever assembly for the Rex-Rotary D280 duplicator makes possible the use of letter, legal, memo-size or postcard stencils without masking. If the lever is switched forward, the roller will disengage earlier for shorter stencils. Switched to the opposite direction, the pressure will be exerted for the full length of the legal-size stencil. A narrow impression roller handles narrow paper and postcards. Rex-Rotary Distributing Corp., 387 Fourth Ave., New York, N.Y.

931. Oxygen tank carrier

An attachable oxygen tank carrier that holds a 20" x 4½" tank is available for use with the manufacturer's post-anesthesia-room stretchers. Use of this holder, which can be moved into the PA room along with the patient, makes oxygen always immediately available. It also provides greater space for maneuvering and handling by nurses and doctors treating post-anesthesia-room patients. Clamps directly to the lower framework of the stretcher chassis in any location, and is available as optional equipment. Colson Corp., Elyria, O.

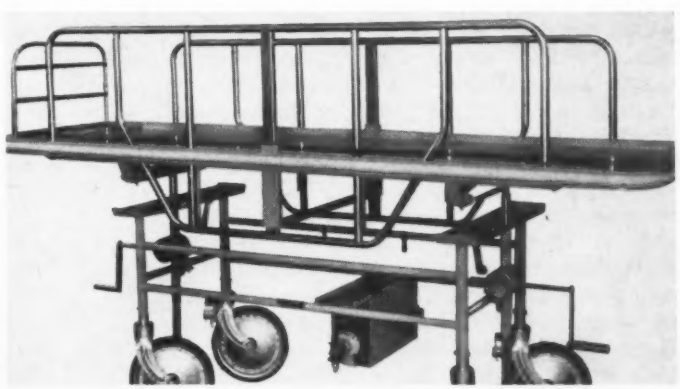


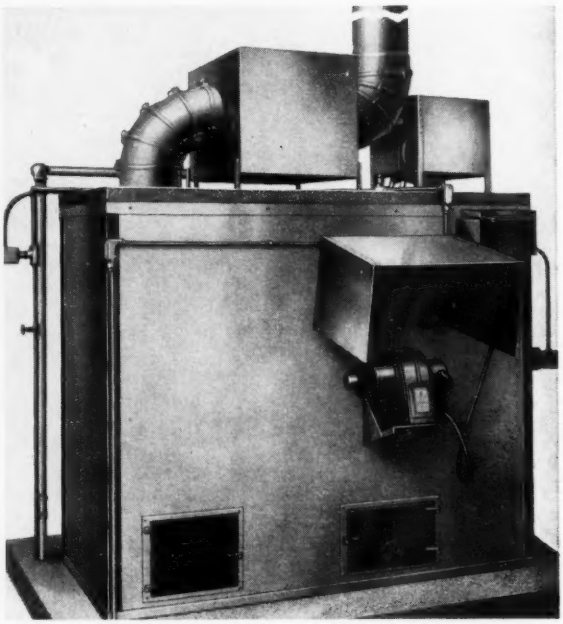
932. Power generator

New line of stand-by power generators includes on all units, from one through 15 kw, a built-in RPM meter, designed to prevent governor speeds' getting out of adjustment—the major source of generator trouble. The meter has green and red color ranges that indicate correct or incorrect governor speed. If the indicator shows the electric plant is operating below its rated performance, a thumb screw adjustment brings it to full operating power. Other standard equipment includes electric starter, shock-absorbing feet, trickle charger, and extra plug-in receptacles including standard, two-way and three-way plug units. No adapter is required. Pacific Mercury, 14052 Burbank Blvd., Van Nuys, Calif.

933. Food blender

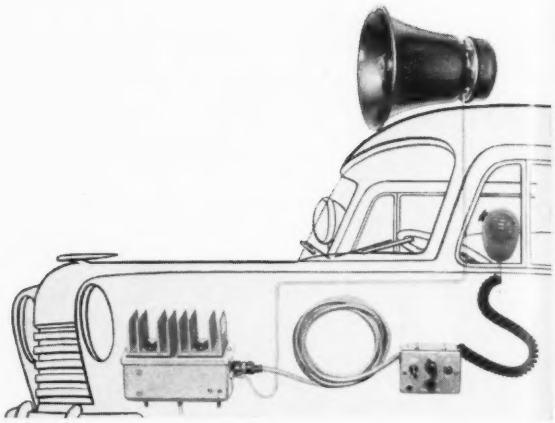
High-speed, knife-like agitator housed in stainless steel, seamless, heavy-duty container pre-digests food by liquefying, pureeing, pulverizing or grinding. Graduated container opens at both ends for cleaning ease; tapered cutting well feeds ingredients continuously and automatically into removable cutting blades. Three new models. John Oster Manufacturing Co., Milwaukee 17, Wis.





934. Incinerator

New incinerator reduces smoke, odor, and fly ash to such small amounts that it easily meets the strictest pollution codes. In addition to multiple burners and combustion chambers, unit has an automatic lock on the feed door, and a water wash. The door cannot be opened until the temperature in the secondary combustion chamber reaches a pre-set heat sufficient for maximum efficiency. The water wash captures any remaining fly ash, and reduces smoke. A special blower provides the right amount of up-draft. Winnen Incinerator Co., 932 Broadway, Bedford, O.

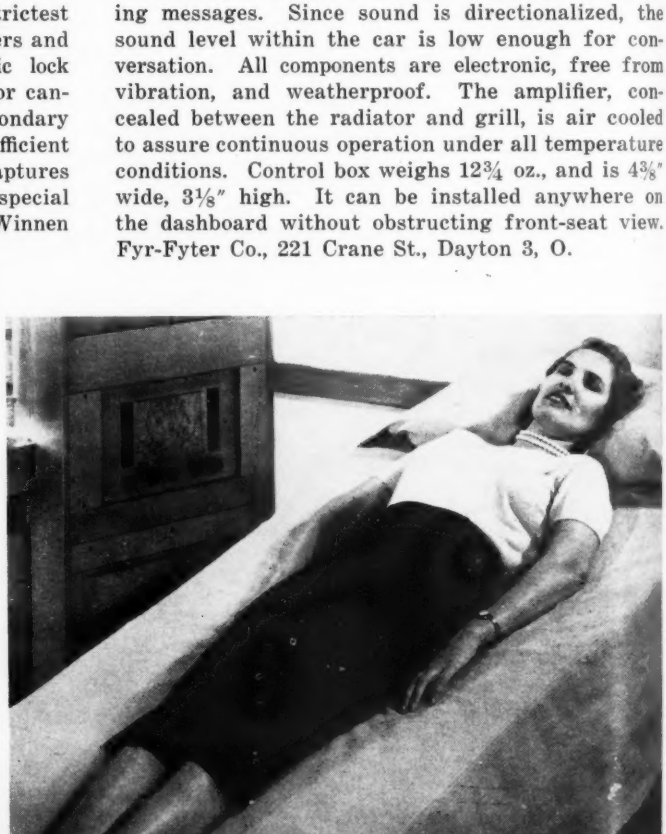


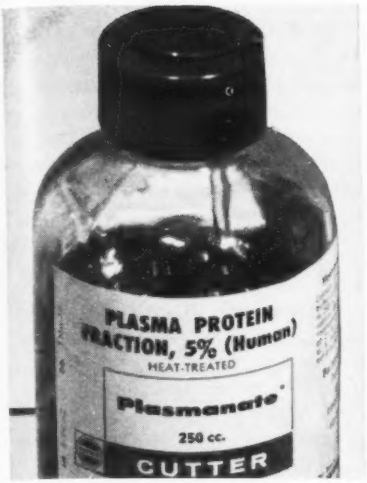
936. Three-way siren

The Penetrator, a powerful new combination siren, public address system, and transistorized radio amplifier directionalizes sound ahead of ambulances and other emergency vehicles. Operating from a battery drain of only 4 amperes, the unit uses its 50 watt output to project voice or warning signals for a distance of one mile. At an emergency scene, it also serves as an attention-commanding public address system; and should the driver want to leave his vehicle, a flip of the switch will amplify incoming messages. Since sound is directionalized, the sound level within the car is low enough for conversation. All components are electronic, free from vibration, and weatherproof. The amplifier, concealed between the radiator and grill, is air cooled to assure continuous operation under all temperature conditions. Control box weighs 12¾ oz., and is 4⅜" wide, 3⅛" high. It can be installed anywhere on the dashboard without obstructing front-seat view. Fyr-Fyter Co., 221 Crane St., Dayton 3, O.

935. Vasculaider bed

The vasculaider bed provides slow rocking therapy with a five-minute pause each time the feet reach a 20-degree feet-down position. Unit is mobile, can be passed through doorways on its side. A foam rubber mattress and standard box spring are provided; or the frame can be built to accommodate other sizes. Standard setting provides the 5-minute foot-down pause, and a travel interval to horizontal position of just under two minutes; pause may also be pre-set for a longer or shorter interval. Normal tipping angle of 20 degrees down, with a return to horizontal; may be pre-adjusted for 10 degrees feet-down and 10 degrees head-down, or other settings. The bed moves slowly and almost silently, making it suitable for continuous therapy throughout the hours of sleeping. Available in hospital and home models. J. H. Emerson Co., 22 Cottage Park Ave., Cambridge 40, Mass.





937. Plasmanate

A 5% solution of selected human plasma proteins which can be heat-treated against the serum hepatitis virus yet remain a stable, clear fluid. The yield of Plasmanate in shock units from the starting raw material is about halfway between human serum albumin and plasma. In 250 cc. flask complete with disposable injection equipment. Cutter Laboratories, Berkeley 10, Calif.

938. Polishing cloth

Dustikin polishing cloth is treated to absorb and hold dust instead of releasing it into the atmosphere. Treated with wax polish fortified with silicones, it cleans and polishes while it dusts. Economical enough to be discarded after use, it saves the collecting, handling, and washing of germ-filled dust rags. Dustikin Products, 32 Beecher St., Newark 2, N. J.

939. Collating machine

New desk-top, portable 6-sheet electric collator will gather 120 sheets or 20 sets of six sheets each, per minute. Each of the six bins holds 1¼" of 8½" x 11" paper. Will collate most tissue, onionskin, one-time carbon, bond, mimeo, and ⅛" cardboard. Fabricated of steel with a silver hammeroid finish, the collator weighs 35 lbs., is 12" wide, 15" deep, and 15" high; 60-cycle, 110-120 volt A.C. motor. Thomas Collators, Inc., 50 Church St., New York 7, N.Y.

940. Dynoptic microscope

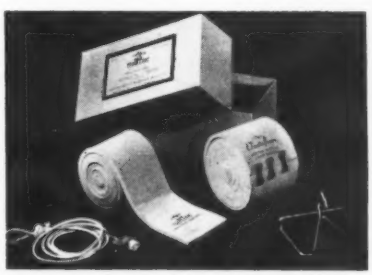
A new line of dynoptic microscopes equipped with triocular bodies which double normal magnification, combine a monocular tube for camera attachment which allows photomicrography or simultaneous visual observation by a second person. Design of the instrument allows 80% of the source illumination to be directed to the monocular camera, with remaining light fully sufficient for visual operation. Observation at the binocular eyepieces is continuous and uninterrupted, even during photographic exposure. Scientific Instrument Division, Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.

941. Shoe cover

Solareum O-Rvershoes, designed to help eliminate sources of cross-infection, are made of 13"-high Scott Dura-Weve paper uppers sewed to certified conductive soles. A tab from the sole runs inside the regular shoe under the foot. Designed for OR and clinic personnel, visiting physicians and nurses, and decontamination workers. Sturdily made for autoclaving and re-use after non-infectious situations. A. G. Verdolyack, Inc., 108 Robert Lane, Kalamazoo, Mich.

942. File boxes

Miracle-File, for storing semi-active or dead records at the end of a fiscal year, cost a fraction of steel cabinets or transfer cases, and have a patented automatic folding action which saves space. Shipped flat, the files can be popped open in a few seconds, with no stitching, stapling, or gummed paper required. Sides and bottom are of two layers of double-walled, heavy-duty corrugated, and the receptacles are strong enough to be stacked when full without using shelving. Telescoping covers keep the contents clean and dust-free. The Paige Co., 114 E. 32nd St., New York 16, N. Y.



943. Traction unit

New and complete traction unit can be applied in a few minutes at the hospital, physician's office, or in the home. It can be quickly demonstrated to the patient, and requires no professional experience to apply; any patient can place himself in traction as recommended by the physician. Consists of a Foamtrac bandage and Elastic-foam pressure bandage, a spreader bar, a traction pulley, and a traction line. No shaving of body parts is necessary, and there is no need for adhesive or moleskin. Conco Surgical Products, 38 Poland St., Bridgeport, Conn.

FILMS, NEW LITERATURE

950. Saving a man's life

Hours to Live, 16 mm., 26-minute, color and sound film is a re-enactment of a true case, showing how hospital facilities and personnel work together to save a man's life. Doctors, nurses, technicians, dietitians, nurses' aides, cooks, and janitors all team up to save a human life. Public Relations Department, Hospital Care Association, Blue Cross Bldg., Durham, N.C.

951. Chromatography

A New Dimension in Paper Chromatography, 4-page, 4-color bulletin, shows how tests which formerly required hours, or even days, are now made in five minutes; yet separations equal classical resolutions. Precision Scientific Co., 3737 W. Cortland, Chicago, Ill.

952. Acid-resistant ware

Twenty-page catalog #G 358 covers polyethylene and nylon products not affected by concentrated acids, oxidizing agents, hydroxides, and polar liquids. Illustrates and describes 95 items. General Scientific Equipment Co., 7516 Limekiln Pike, Philadelphia 50, Pa.

953. Hydrocarbon vapor adsorption

Bulletin SC-1047 announces the 14 standard sizes available in Selas Vape-Sorbers, and explains in detail how the device protects air and gas systems and pneumatically-operated instruments and mechanisms from harmful effects of oil vapor, free oil, water-oil emulsions, and dirt. Selas Corporation of America, Dresher, Pa.

954. Pediatric premedication

Premedication in Pediatric Surgery —A Program for Sedation and Quiescence is a color film produced at the Research and Educational Hospitals, University of Illinois, Chicago. Max S. Sadove, M.D., nationally-known anesthesiologist, discusses premedication procedures and technics to allay children's fear of surgery. Film Library, Wyeth Laboratories, Box 8299, Philadelphia 1, Pa.

955. Publicity kit

A do-it-yourself publicity kit for hospital administrators, *How to Get Out of the Quiet Zone,* is a guide, complete with a checklist of potential stories, sample news releases, and the do's and don't's of proper publicity procedures. Shampaine Industries, Advertising Dept., 1920 S. Jefferson, St. Louis 4, Mo.

956. Inhalation therapy

Three major additions to the NCG line of medical inhalation therapy equipment are described in detail in new bulletins. They cover the company's recently developed intermittent vacuum regulator, Eliot plastic tents and inhalation therapy accessories, and the Monaghan Ventalung, an intermittent positive pressure breathing unit. National Cylinder Gas Division of Chemetron Corp., 840 N. Michigan Ave., Chicago 11, Ill.

957. Sanitation

The New Dimensions of Modern Environmental Sanitation is a 44-page book directed to the professional man concerned with the theory and practice of sanitary maintenance of large buildings. Discussed are the advantages of synthetic detergents over soaps, detergency, rinsing, metallic plates, chelating agents, and alkalinity of detergents; sanitizing properties, phenol coefficients, quaternary agents, odor control, and odor counteraction. Airkem, Inc., 241 East 44th St., New York 17, N. Y.

958. Cardiological equipment

Four-page brochure on the Dallons cardioscope, temperature monitor, cardiophone, electro-cardiotone monitor, EEG preamplifier, cardiac defibrillator, and cardiac pacemaker. Included are prices, specifications, and accessory units. Ohio Chemical & Surgical Equipment Co., 1400 E. Washington Ave., Madison 10, Wis.

959. Diet and heart disease

A complete bibliography with abstracts of 33 recent medical reports on the relationship between diet, cholesterol levels, atherosclerosis, and coronary artery disease for physicians interested in the relationship between unsaturated fatty acids and heart disease. Crookes-Barnes Laboratories, division of Chemway Corp., Fairfield Rd., Mountainview, N.J.

960. Diaper service industry

Diaper Service—A Real Service Industry, a 17-page booklet, emphasizes the professional and scientific aspects of the 25-year-old industry which now serves more than 1,000,000 babies a year. Booklet explains the industry's clinical, research, and laboratory control programs, and gives complete details of the typical washing formula used to insure soft, clean diapers, free from harmful bacteria. Diaper Service Industry Information Bureau, Suite 1738, 12 S. 12th St., Philadelphia 7, Pa.

961. Maintenance booklet

How to Finish and Maintain Hard Floors is an 8-page booklet detailing effective maintenance procedures for terrazzo, marble, concrete, magnesite, and ceramic tile. Avoidance of maintenance problems is discussed. Illustrated. Huntington Laboratories, Inc., Huntington, Ind.

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Executive Offices: 12 South 12th St., Philadelphia 7, Pa.

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962. Cafeteria units

Catalog C-400 describes the Custom-Modular cafeteria units, which include such features as the patented Vapor-matic food warmer, decorator counter fronts to match any decor, and molded edges on both sides of the continuous custom tops of 14-gauge stainless steel. The Bastian-Blessing Co., 4203 W. Peterson Ave., Chicago 46, Ill.

963. Fire-insulated safes

Four-page folder on new Class C one-hour, double-door safe line discusses advantages of the Bolt-O-Matic Dor-Gard, exclusive prestressed stay rod construction, new Vue-Gard combination dial and patented expansion joint. Gives safe specifications and suggested interior arrangements for four different models. Form CDD-58, Meilink Steel Safe Co., 1672 Oakwood Ave., Toledo 6, O.

964. Temperature programming

Bulletin No. 838 gives facts about temperature control in gas and vapor chromatography. In 8 pages, illustrated by tables and curves, questions are posed and answered about column temperature, retention time, detector temperature, resolution, and temperature programming. Burrell Corp., 2223 Fifth Ave., Pittsburgh 19, Pa.

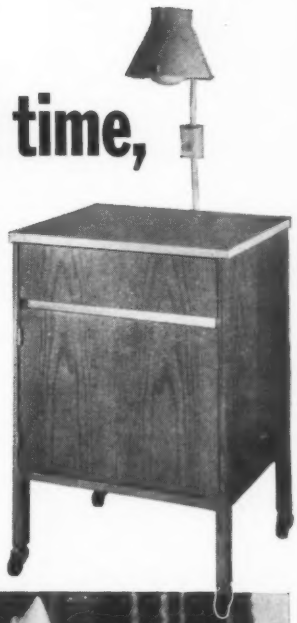
965. Snow throwers

Booklet describes the company's full line of power snow throwers, including the Champion, a heavy-duty, self-propelled machine which clears a 20″ swath at a rate of 520 shovelfuls per minute. Recommended for institutional snow removal jobs. All models have open chute design which prevents clogging in packed or sticky snow. Jari Products, Inc., 2990 Pillsbury Ave., Minneapolis 8, Minn.

966. Diuretic therapy film

Edema and Mercurial Diuretics, 16 mm. sound film discusses the types, causes, and methods of treatment of edema, and reviews the history of the development of mercurial diuretics. A highlight of the film is a re-enactment of Dr. Alfred Vogl's discovery, in 1919, of the diuretic effect of organic mercurials. Film Library, Wyeth Laboratories, Box 8299, Philadelphia 1, Pa.

Now, for the first time, a lamp mounted on a bedside cabinet *(by Hill-Rom)*



puts the light right where you need it

Here, for the first time, is a lamp placed where a hospital lamp should be placed—on the bedside cabinet within easy reach of the patient, yet out of the way of the nurse. This new Hill-Rom lamp is attached to the back side of the cabinet. It rolls on a track, so may be used on either side of the cabinet. It may also be moved entirely out of way when full access to the top of the cabinet is desired.

A parabola shade inside the outer shade permits spotting the light when intensive light is needed for examination. Inverting the shade gives indirect light. The shade is ventilated—will never become hot. A convenience outlet permits plugging in any electric appliance used at the bedside.

This lamp is completely approved by Underwriters' Laboratories, Inc. as safe for hospital use. Complete information on request.

HILL-ROM COMPANY, INC. • Batesville, Indiana

The Pharmacy

Drug Progress Against Resistant Respiratory Infections

Resistant Strains Not New

Dr. Julius Lane Wilson, professor of medicine and director, Henry Phipps Institute, Philadelphia, recently reminded us that the first clinical trials of streptomycin in 1945 showed tubercle bacilli developed resistance to that drug rapidly and progressively. Streptomycin treatment was then limited to 42-120 days by this factor and its autotoxicity.

In 1947 it was predicted that we would require a new antituberculous drug every three years, as resistant organisms spread in the population.

The pharmaceutical industry introduced PAS in 1948, which led to the development of an effective, prolonged treatment for all forms of tuberculosis. Although itself weakly effective, PAS made it possible to give two effective drugs concurrently, mathematically reducing the bacterial reproductions and mutations to a point which permitted the patient to resist.

But in 1952, Isoniazid—effective, inexpensive, and orally administered—set a new high standard. With it the possibilities of single drug therapy and prolonged therapy became a reality. Resistant bacteria did develop, but the patient did not worsen, as with streptomycin.

Future Tuberculosis Hazards

The anticipated accumulation of new tuberculosis infections due to resistant organisms cannot now be estimated, according to Dr. Wilson. Studies show that in new cases of tuberculosis about 25 percent have originally resistant bacilli. In terms of numbers, this means 1,000 to 1,400 patients each year in the U.S.

What is evident, however, is that any relaxation of the strict control of patients with positive sputum by permitting home care or, at this point in development, single drug treatment, will increase this problem.

Antibiotics in Pneumonia

Combinations of drugs have made progress against pneumonia. However, whether this disease develops in a patient already in the hospital who is weakened by other causes, or whether it exists as a primary cause of the patient's hospitalization, it still can involve long-term antibiotic therapy.

Dr. William L. Hewitt, M.D., professor of medicine, University of California School of Medicine, Los Angeles, Calif., has cited three cases which directly relate current drug therapy to the disease in the patient.

In the first of these cases, the patient developed an extensive bilateral pneumonia, incident to staphylococcal sepsis following routine herniorrhaphy. The organisms isolated from the blood and the wound were of different bacteriophage type and antibiotic sensitivity; the patient responded to Chloromycetin plus erythromycin.

In the second case, however, the staphylococcus aureus showed increasing resistance to penicillin and erythromycin, though of the same bacteriophage type. The patient had presented acute bacterial endocarditis.

Secondary Resistant Infections

In a third patient an acute necrotizing pneumonia was present, with abscess formation. Here, long-term antibiotic therapy was associated with a secondary infection, Aspergillus fumigatus and an intrapulmonary mycetoma.

It should be noted that Dr. Hewitt has stated infections with resistant gram-negative bacilli are equally frequent following antibiotic therapy or exposure to the hospital environment, and carry a similar mortality as staphylococcal infections.

In a large general hospital, streptomycin and tetracycline-resistant bacteria are found to most frequently cause bacteriemias with gram-negative bacilli.

Lesser Infections

In searching out the culprit for chronic sinusitis, bronchiectasis, and lung abscess, the gram-negative organism Bacteriodes may have considerable importance. At present, the various strains appear sensitive to moderately high concentrations of penicillin, and to the broad-spectrum agents and erythromycin.

It has been stated that virtually no progress has been made against the common cold and virus illnesses that plague the population afresh each winter. On the other hand, pharmaceutical breakthroughs can be expected to occur as each guilty organism is isolated by the pathologists. Like most present-day disciplines, it will be a joint effort.

But the going fear could well be that these viruses, if they were not originally resistant to the current range of antibiotics, have become so as the drugs have been utilized in nonspecific efforts to control them.

More detailed information from the authorities quoted can be obtained in the following papers:

Hewitt, William L., M.D., "Resistant Bacterial Pneumonia in Adults"

Wilson, Julius L., M.D., "Resistant Organisms in Tuberculosis"

Both were presented at the International Colloquium on Resistant Infections, 1958, New York City.

prescription pad

Triple Action Anti-Rheumatoid

Prednyl, for relief of pain, muscle spasm, and swelling in inflammatory and rheumatoid conditions, has been introduced by Arlington-Funk Laboratories. Administered orally to those tolerating adrenocortical therapy.

Each tablet contains 1 mg. prednisolone, 5 gr. salicylamide, 33.3 mg. water soluble citrus, bioflavanoid compound, 33.3 mg. ascorbic acid, and 50 mg. aluminum hydroxide.

Prednyl tablets are supplied in bottles of 100 and 500.

Stomach Acid Control

Tropasil, marketed by Crookes-Barnes Laboratories, has two buffering agents for relief of heartburn and gastric hyperacidity.

Each scored tablet contains 200 mg. aluminum proteinate, and 300 mg. aluminum magnesium hydroxycarbonate.

Tropasil tablets are marketed in boxes of 100, cellophane strips of 10 tablets each.

Positive Menopause Treatment

PAUStabs T.M., specialty of Frankay Laboratories, Inc., treats both the physiologic and psychologic aspects of the menopausal syndrome.

Tablets are coated; the 0.05 mg. of ethinyl estradiol, and 5.0 mg. of methyltestosterone, are released on ingestion; the 10.0 mg. of amphetamine sulfate and 50.0 mg. of amobarbital are released throughout the day.

PAUStabs T.M. are supplied in bottles of 30 and 100 tablets.

Oral Nasal Decongestant

Charles C. Haskell & Co. has announced Isoclor, an oral nasal decongestant for treatment of colds, sinusitis, rhinitis, and hay fever. Haskell particularly reports that no drowsiness or other side effects are noticeable.

Each tablet contains 4 mg. chlorprophenpyridamine maleate and 25 mg. d-isoephedrine HCl. Isoclor tablets are supplied in bottles of 100 and 1,000.

Peripheral Vasodilator

Cyclospasmol has been developed by Ives-Cameron Co. as an orally administered nasodilator and spasmolytic. It is designed to speed healing of leg ulcers, help prevent gangrene in lower extremities affected by peripheral vascular disease, and provide increased trouble-free walking.

Each tablet contains 100 mg. cyclandelate. Cyclospasmol is supplied in bottles of 100 tablets.

Nephrotic Edema Reducent

Dextran 12% Solution is a preparation of partially hydrolyzed dextran in a salt-free and pyrogen-free sterile solution. It is administered parenterally in treatment of nephrosis to lessen edema and enhance diuresis.

Supplied by Abbott Laboratories in 250-cc. Abbo-Liter container, in boxes of six.

New Dosage Forms

Heparin Sodium Solution, an anticoagulant, is now available from Abbott Laboratories in a disposable ABBOJECT syringe containing 1-cc. of heparin sodium sterile solution, 20,000 U.S.P. units per cc., or in a safe-capped, rubber-stoppered, multiple-dose vial containing 5-cc. of solution, 20,000 U.S.P. units per cc.

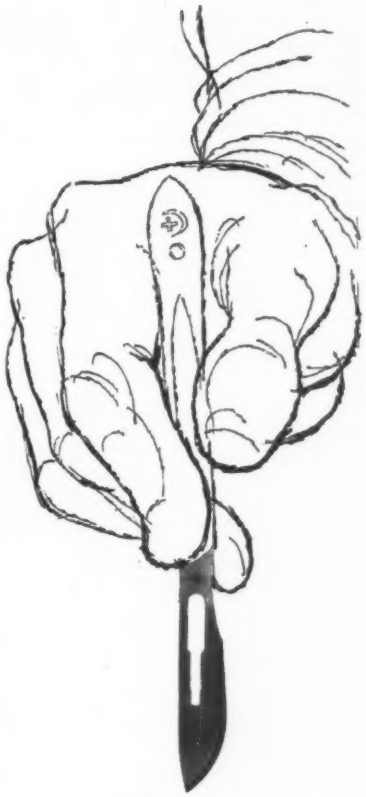
* * *

Knoll Pharmaceutical Company has introduced Vita-Metrazol in tablet form, each containing equivalent ingredients to 5-cc. of the elixir, plus an additional 25 mg. of ascorbic acid. Supplied in bottles of 100 and 1,000 tablets.

* * *

Two sustained-release dosage forms of Metamine, for stress-associated angina pectoris, have been introduced by Thos. Leeming & Co., Inc.

Metamine Sustained with Reserpine contains 10 mg. of aminotrate phosphate and 0.1 mg. of reserpine; Metamine with Butabarbital Sustained contains 10 mg. of aminotrate phosphate and ¾ gr. of butabarbital. Both forms are supplied in bottles of 50 tablets.



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clinical notes

New Diabetic Drug

Good results in 17 of 25 patients who tried the oral diabetic drug chlorpropamide* are reported by Spannuth in the December, 1958 issue of *Clinical Medicine*.

In a seven-months' clinical trial, the 17 were satisfactorily and better controlled with chlorpropamide than with insulin or diet alone. Nine of the 17 no longer required insulin; five required less insulin. Two had been controlled to a fair degree by diet alone, and one had been under fair control with tolbutamide.

Of the three patients with onset of the disease between ages 6 and 12 years, one was better controlled with the drug and required less insulin than previously. Of six patients with onset between 17 and 26, two were better controlled without insulin, and two better controlled with less insulin.

Control was unimproved in eight patients.

Side-effects observed included nausea, vomiting, abdominal pain, fatigue, and drowsiness. Most of the effects disappeared when starting doses of 1,500 mg. per day were reduced. No side-effects were serious enough to require discontinuation of the drug.

*Diabinese, P-607, Pfizer Laboratories.

Rare Infection

Seven cases of staphylococcal parotitis, a rare form of hospital-acquired staphylococcal disease, occurred at one hospital in a five-month period, Petersdorf, Forsyth, and Bernanke report in the *New England Journal of Medicine* 259: 1250-54 (December 25, 1958).

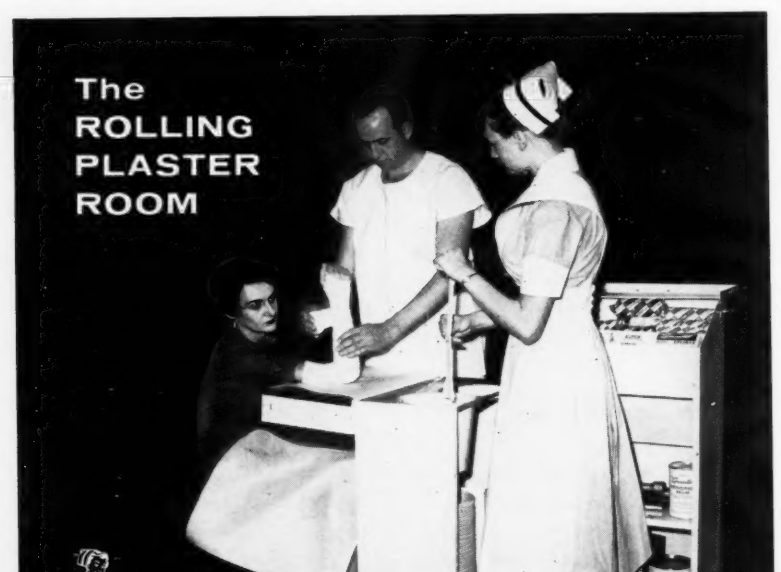
This virulent disease is occasionally seen in postoperative patients but has been thought to be on the wane, the authors point out. Only three of these seven cases occurred postoperatively, however.

The infection was characterized by swelling, erythema, and tenderness in the parotid region, associated with fever and very high white-cell counts (mean, 33,000).

Dehydration and routine prophylactic use of antibiotics appear to be the most important predisposing factors in the development of this infection, the authors point out. The most sensitive organism isolated came from the patient who had not received any chemotherapy before onset of infection in the salivary gland.

Treatment consists of administration of large doses of antibiotics to which the organism is sensitive. The organisms were resistant to penicillin, streptomycin, and the tetracyclines. All were sensitive to neomycin, bacitracin, and novobiocin.

Staphylococcal parotitis is not a metastatic infection, the authors conclude. Three patients had staphylococcal infection elsewhere in the body, but the organism was of a different phage type than the one cultured from the gland.



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Training Medical Technologists

First in a series

By E. E. Myers, M.D.*

Introduction:

There is an increasing need for well-trained medical technologists. The only place that training can be given is the hospital laboratory, aided by public health and clinic laboratories. The only one who can give this training is the pathologist, aided by the medical technologist.

Every hospital laboratory has an obligation to train medical technologists if it can meet the requirements for an approved school of medical technology. An approved school will not only help increase the number of medical technologists, but will raise the standards of the laboratory and improve the service to the patient.

In organizing and directing a school of medical technology the pathologist comes in contact with two agencies, the Council on Medical Education and Hospitals of the American Medical Association, *which approves schools* of medical technology, and the Registry of Medical Technologists of the American Society of Clinical Pathologists, *which passes on the individual* as to qualifications, gives an examination, and registers the technologist.

Two publications which are useful in organizing and conducting a school of medical technology are "A Curriculum for Schools of Medical Technology," edited by Israel Davidson, M.D., and a booklet by the Board of Schools of Medical Technology on the organization of, and recommended records in, an approved school.

The articles in this series are not meant to be a review of the literature or a compilation of data obtainable from various sources. They encompass the experiences of only one school. However, observations and generalizations will be made from the general experience of the author.

*Director, the Myers Clinic-Broaddus Hospital School of Medical Technology, affiliated with Alderson Broaddus College, Philippi, W. Va.

Organization:

The training program should be organized along standard academic lines. One or two hours of lecture a day should be given. Two to four hours of laboratory or practice work for each hour of lecture, along with conferences and discussions, would complete the eight-hour day.

Not only should personnel meet the minimum standards of the essentials of an approved school of the American Medical Association, but instructors should have proper academic backgrounds. This means a minimum of a master's degree for full-course lecturers. Those supervising bacteriology and chemistry departments should have at least a master's degree. One of the marked deficiencies in medical-technology training is that persons with a bachelor's degree are instructing students in college-level work. Those without graduate training can assist in the practical training.

The courses should be on a college level or, preferably, on a graduate level. Every laboratory should encourage its technologists to pursue graduate study, which can often be done part-time while the technologist continues to work.

There should be sufficient personnel to carry on the work of the laboratory without help of the students. One good test of this is for all students to take their vacation at the same time. This gives the personnel not only a rest from teaching but also a chance for reorientation concerning the training program.

Curriculum:

The curriculum should be arranged in close affiliation with a college. The accompanying chart (page 88) is a suggested list of courses.

Course Descriptions:

Urinalysis, 4 credits. Lectures covering all the phases of examination of normal and abnormal urine, including chemical and microscopic examination, and kidney function. Practical performance of routine and special examinations. Lecture 2 hours, laboratory 4 hours.

Blood Bank and Pre-Transfusion Methods I, 2 credits. Lectures on the theories of the blood groups, including the Rh types. Practical work in blood-bank procedure, including typing, cross matching, and drawing of blood. Lecture 1 hour, laboratory 2 hours.

Blood Bank and Pre-Transfusion Methods II, 2 credits. Continuation of above. More advanced instruction in subtypes, unusual blood factors, Rh antibody titers, the Coombs test, and new technics. Lecture 1 hour, laboratory 2 hours.

Gastric Analysis and Duodenal Drainage, 2 credits. Physiology of the stomach and gallbladder. Changes in disease and resultant findings in gastric contents and bile. Practical work in introduction of the Rehfuss tube, collection of specimens, titration for gastric acidity, and microscopic examination of bile sediment. Lecture 1 hour, laboratory 2 hours.

Hematology, 6 credits. Lectures include study of normal and abnormal blood and the physiology and pathology involved. Demonstration

(*Continued on next page*)

Curriculum in Medical Technology

First Year (pre-technical course)

First Semester	Credit Hours
English	3
Required course or elective	3
Zoology	4
General Chemistry	4
Orientation	2
Physical Education	1
	17

Second Semester	Credit Hours
English	3
Required course or elective	3
Zoology	4
General Chemistry	4
Humanities	2
Physical Education	1
	17

First Summer Session (pre-technical course)

Social Science, Credit Hours 6

Second Year (pre-technical course)

First Semester	Credit Hours
History	3
Humanities	2
Comparative Anatomy	4
Organic Chemistry	4
English	3
	16

Second Semester	Credit Hours
History	3
Psychology	3
Embryology	4
Quantitative Analysis	4
English	3
	17

Second Summer Session

(Make-up of any deficiencies in pre-technical course)

Third Year (technical course)

First Semester	Credit Hours
Anatomy and Physiology	2
Urinalysis	4
Hospital Organization	1
Medical Terminology	1
Blood Banking and Pre-Transfusion Methods	2
Hematology	6
	16

Second Semester	Credit Hours
Gastric Analysis and Duodenal Drainage	2
Examination of Feces, Sputum, and Puncture Fluids	2
Blood Banking and Pre-Transfusion Methods	2
Basal Metabolism	2
Histopathologic Technic	3
Special Hematology	2
	15

Third Summer Session (technical course)

Biochemistry, Credit Hours 10

Fourth Year (technical course)

First Semester	Credit Hours
Bacteriology	8
Parasitology	4
Serology and Immunology	3
	15

Second Semester	Credit Hours
Mycology	3
Records	2
Medical Ethics	1
Seminar	5
Serology and Immunology	3
	14

THE LAB continued

and practice in the technics of withdrawing venous and capillary blood. Blood-cell counting, including total and differential counts, hemoglobin determination, coagulation and bleeding time, sedimentation rate, etc. Lecture 3 hours, laboratory 6 hours.

Examination of Feces, Sputum, and Puncture Fluids, 2 credits. Lectures on the interpretation of gross and microscopic findings in the feces, sputum, transudates, exudates; introductory study of parasites which inhabit the intestines and lungs. Concentration methods for the examination of feces are performed. Staining technics are stressed. Lecture 1 hour, laboratory 2 hours.

Histopathologic Technic, 3 credits. Part I is introductory and embodies a description of the basic types of human tissues, structural make-up of organs and organ systems, biochemical properties of tissues, and fundamental pathologic changes. Lectures are followed by studies of tissue sections. Part II consists of technic for gross specimens and histopathologic methods. Principles of fixation, preparation of museum specimens, decalcification, tissue-block dehydration and embedding, paraffin sectioning, and emergency frozen-section technic. While emphasis is placed on routine hemotoxylin and eosin staining, a number of the relatively more useful special staining methods are also included. Lecture 2 hours, laboratory 6 hours.

Basal Metabolism, 2 credits. Types of apparatus for the determination of the basal metabolic rate are studied. Lectures are given on physiology and technics. The student performs basal-metabolism tests on normal and abnormal subjects. Lecture 1 hour, laboratory 2 hours.

Electrocardiography, 2 credits. The theory and practical working of various types of electrocardio-

(Continued on page 91)

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graphs and the ballistocardiograph are studied, the technic of obtaining a good electrocardiogram is given, and the avoidance of technical faults in the record is stressed. Practical performance of tests on normal and abnormal subjects. Lecture 1 hour, laboratory 2 hours.

Biochemistry, 10 credits. This course deals with physiochemical principles, the study of enzymes, and the chemistry involved in the functioning of various organs and systems, including the variations in disease states. Determinations are performed on various specimens, especially blood, and experience is obtained in the use of various equipment such as the photometer, spectrophotometer, pH meter, and electrophoresis apparatus. Lecture 5 hours, laboratory 10 hours.

Bacteriology, 8 credits. The systematic study, classification, and identification of pathogenic bacteria. Lectures and laboratory assignments emphasize the cultural, morphological, and biochemical activities of bacteria. Lecture 4 hours, laboratory 8 hours.

Parasitology, 4 credits. Systematic study, classification, and identification of parasites of man occurring in the blood, intestines, etc. Prepared specimens are used to supplement studies on patients. Lecture 4 hours, laboratory 8 hours.

Mycology, 3 credits. Systematic study, classification, and identification of pathogenic yeasts, molds, and actinomycetes. The saprophytic forms are also studied, and the differentiation from pathogenic varieties is stressed. Lectures and laboratory work emphasize examination of clinical material and identification of cultures. Lecture 2 hours, laboratory 2 hours.

Serology and Immunology I, 3 credits. Study of fundamental immunological principles involved in the use of various agglutination, precipitation, and complement-fixation tests. Performance of the VDRL, Mazzini, and Kolmer Wassermann tests. Lecture 1 hour, laboratory 4 hours.

Serology and Immunology II, 3 credits. Continuation of above. Immunological principles applied in serologic testing—heterophile antibody test, latex-fixation test, antistreptolysin, etc. Lecture 1 hour, laboratory 4 hours.

Special Hematology, 2 credits. Lectures and practice on hematologic problems, some of a semi-research nature, including supravital staining, tests for coagulation defects, hemoglobin electrophoresis, immunohematology. Lecture 1 hour, laboratory 4 hours.

Records, 2 credits. The student is assigned the care of stock inventory records and the making of monthly laboratory reports. The student, during rotation, is responsible for records of each department and for making out orders for supplies. The importance of records is emphasized throughout the training.

Seminar, 5 credits. Summarization of the experiences of the student. The research approach to problems is discussed, and the student is required to pursue some phase of original investigation. Frequent conferences and discussions.

Anatomy and Physiology, 2 credits. A study of the structure and normal function of the human body. Lecture 2 hours.

Introduction to Hospital Organization, 1 credit. This course includes a brief review of the history of the development of the modern hospital. The relationships among the various departments, the medical and nursing staffs, and the paramedical professions are studied.

Medical Ethics, 1 credit. Specific problems of ethics in the hospital are studied on the basis of general principles of ethics. Course also includes study of the relationship of the physician, other professional persons, and nonprofessional personnel, to one another, to the patient, and to society.

Medical Terminology, 1 credit. Includes basic vocabulary background material necessary for all students to understand and use properly the many words with which they will come in contact in anatomy, pathology, bacteriology, and other courses.

The following is an abstract from the recent American Society of Medical Technologists meeting.

Newer Tests Expand Kidney Function Knowledge

Variety of Procedures Evolved in Past 10 Years

All improvements in renal testing —replacing the old methods of looking, tasting, boiling— have occurred since 1948. In that time we have learned, or verified, that kidney functions include:

—Excretion of end products; protein metabolism.

—Regulation of fluid balance.

—Regulation of electrolyte balance.

—Maintenance of a normotensive state, normal blood pressure.

We concern ourselves here with excretion of end products. The filtering process of the kidneys eventually puts back into the blood stream elements which should not be excreted. When proper pressure isn't sustained, the kidneys do not filter properly.

In addition, since the kidney tubules, where reabsorption takes place, are made up of millions of tubular cells, improper functioning there results in highly excessive voiding and physiologic imbalance in the body.

To determine the functioning of the kidneys, we employ the following procedures: Reconcentration test of the end products of metabolism to learn how much filtrate is formed in a given length of time; renal plasma flow test, using PSP to measure tubular function (in normal functioning, 80 percent of waste is removed by tubular action, 20 percent by filtration; variation shows how much tubular function exists).

Also used are the concentration test, which measures tubular function by means of dilation, and the clearance test. In the latter, from 20 to 30 percent per minute is accepted as normal urine flow. From 15 to 30 minutes from time of injection to complete clearance indicates normal functioning; a close time check on the part of the medical technologist is of utmost importance.—*Robert D. Taylor, M.D.,* Marquette University School of Medicine, Milwaukee.

American Association of Blood Banks - -

Cincinnati, November 20-22

Need Answers

Well-Informed Technicians Vital to Public Relations

Talking to the patient while drawing his blood is routine procedure, and during this period the donor is likely to inquire about administrative policies of the local blood bank.

It would be helpful if the technician had ready answers to questions which have been found most common. These include queries on blood replacement policies of the bank, reasons for variations in replacement policies in different locales, high cost of blood to patient, reasons patient must pay even if blood is replaced, inter-bank transfers, and arrangements for financing the local blood bank.

It is also important that the technical staff know how to find the patient's account record quickly and be able to give the necessary information efficiently and with ease. The patient's records should, of course, be kept up to date by the bookkeeper and made accessible to the technical staff.

The personnel at the blood bank should remain alert to their excellent opportunities to create better understanding between the patient and the blood bank services.—*V. Morgan, MT(ASCP)BB,* administrative director, John H. Thomas Memorial Blood Bank, Gainesville, Fla.

Severe Reactions

Contaminated Blood Highly Toxic in Transfusion Use

Bank blood that has been stored should be cultured before infusion to guarantee its sterility, particularly since bacteria isolated from contaminated transfusions have been grown at temperatures of 7 deg. C.

In specimens showing hemolysis, acid hematin can be found in varying amounts and the plasma may have a characteristic brown color. However, easily recognizable surface signs are not always present, and, even when hemolysis is not present, the red cells of blood so contaminated are exceedingly fragile in 0.6% saline.

Transfusion reactions in patients receiving blood contaminated with gram-negative psychrophylic bacteria are severe. Experiments with dogs have consistently resulted in reticuloendothelial blockade, and death.—*M. S. Litwin, M.D.,* and *E. S. Reynolds, M.D.,* resident fellows in surgery, *C. W. Walter, M.D.,* associate clinical professor of surgery, and *P. Ejarque,* research fellow in pathology, all of Harvard Medical School, Boston, Mass.

Several Methods Tried

New Studies Show Hepatitis Detection Still Ineffective

A practical method for chemical screening of blood donors to detect the "silent carrier" of hepatitis has not yet been found.

Recent chemical tests on sera of 40,000 donors failed to show any difference between donors with so-called chemical indications of serum hepatitis and those selected at random, when results were correlated with incidence of the disease.—*N. G. Maxwell, M.D.,* associate director, Milwaukee Blood Center, Inc.

Serologic Test Fails

The serologic test employing Rhesus monkey erythrocytes seems to be of limited value in the diagnosis of viral hepatitis.

Forty-one serums from patients having infectious and serum hepatitis in the acute or convalescent stage were investigated. As a control, 700 random healthy sera were studied. The comparison yielded negative results. — *E. R. Jennings, M.D.,* director of laboratories, and *C. Hindmarsh, MT(ASCP)BB,* chief medical technologist, both of Woman's Hospital, Detroit.

Titers Not Indicative

Follow-up hospital studies indicated there was no relationship between height of Rhesus agglutination titers in donor bloods and the occurrence of hepatitis in transfused recipients.

The samplings on which these conclusions were based included over 8,000 donor sera routinely titered. When findings were compared to the occurrence or non-occurrence of hepatitis in transfused patients there were no positive results.—*W. J. Kuhns, M.D.,* and *P. Hyland,* both of Central Blood Bank of Pittsburgh, Pittsburgh, Pa.

Degree Offered

Graduate Program Given In Immunohematology

A 2-year graduate course in Immunohematology has been designed by the University of Cincinnati Blood Transfusion Service and the faculty of the College of Medicine. It is designed to span the gap between the clinician and the laboratory, recognizing the complexity of operating an efficient hematherapy service.

The course provides instruction in the theoretical and practical application of the antigen-antibody complexes as they relate to hematherapy. It imparts the administrative knowledge necessary to handle those problems peculiar to a blood transfusion service, and thus develops an individual with technical training on an executive level.

The student is awarded a master of science degree upon satisfactory completion of the program.—*W. E. Haesler, Jr.,* technical director, University of Cincinnati Blood Transfusion Service, Cincinnati, O.

Kell Antigen

Additional Antibody Causes Hemolytic Disease

The anti-K_p^b antibody has caused at least one example of hemolytic disease in the newborn, though it previously had been associated only with transfusion reactions.

The cord blood of the infant, who had an Rh positive mother, yielded

a 4+ Coombs' test upon routine examination. The baby's blood rose from 8.9 Gm. at birth to 16.6 Gm. by the third day, and then slowly decreased. Recovery was accomplished without benefit of exchange transfusion.

Since the mother had no previous history of transfusion or autohematherapy, and had borne 2 normal children, her serum was investigated further. It disclosed an abnormal antibody identified as pure anti-K_p^b.

The family inheritance was traced to show the pathway of Kell antigens. Results suggested two possible Kell group inheritances, one involving the special gene K^o and the other a straight inheritance of k^a.—*L. Anderson, J. B. White, B. Liles, A. Cahan, R. Sepson* and *J. A. Jack*, all of the Knickerbocker Foundation, New York, N.Y.

Successful Transfusions

Buffy-Poor Plasma Given Buffy-Sensitive Patients

Some patients develop increasingly frequent and severe febrile reactions to donor blood, even though it appears compatible by sensitive cross-matching tests.

A leukocyte-agglutinating body is often present in the sera of such patients. They can be transfused uneventfully with red cells and plasma, but will react severely to white cells and platelets from the same unit of donor blood.

A series of control patients lacking leukocyte-agglutinating isoantibodies, on the other hand, reacted neither to the buffy-poor nor buffy-rich fractions.

Indicating the validity of the method, 50 units of buffy-poor resuspended red cells were prepared by the dextran method and successfully transfused to patients with known sensitivity to buffy coat.—*M. Cassell, MT(ASCP)BB*, and *H. Chaplin, Jr., M.D.*, both of the departments of medicine and preventive medicine, Washington University School of Medicine, St. Louis, Mo.

Deaths Prevented

Incompatible Transfusions Made Possible in Animals

The use of reserpine-pretreatment as a means of preventing antigen-antibody precipitates was tried on rabbits with rather promising results.

When injected with incompatible erythrocyte suspensions, rabbits which had been unprepared died within 3-4 minutes. On the other hand, rabbits which had been pretreated with Serpasil were able to tolerate the incompatible erythrocytes as long as 24 to 48 hours after the initial Serpasil injections.

Since the release of serotonin from platelets by macromolecular substances is thought to play a part in the lethal effects of blood incompatibilities, these animal experiments may offer a basis for advances in human preventive treatment.—*Takio Shimamota, M.D., Michiro Inuoe, M.D.*, and *Mitsuo Yokoyama, M.D.*, all of Tokyo Medical and Dental University, Tokyo, Japan.

Helpful Method

Punch Cards Aid Blood Bank In Good Record Keeping

Marginal punch cards offer an effective means of blood bank record keeping. A system of one card for each recipient, and a card of different design for each unit of blood, has been used with the following advantages:

1. Decreases percentage of outdated blood.

2. Provides safeguards against results of technical and clerical errors.

3. Provides knowledge of patient's previous reactions before cross-matching, indicating need for

(Continued on next page)

The mobile blood bank was a feature of the technical exhibit presented by Fenwal. Discussing technics for collecting blood in the Blood-Pack Unit are, l. to r., Lloyd R. Newhouser, M.D., director of The John Elliott Blood Bank, Dade Co., Fla.; Edgar Landry, also of The John Elliott Blood Bank; and Colonel R. E. Hunter of The Upper Pinellas County Blood Bank, Fla.

special blood components.

4. Maintains a unit patient record of transfusions received, donors, and source of Red Cross credits. Establishes a donor and credit list for future replacements.

5. Provides a list of rejected donors with reason for rejection, supplying guidance for acceptance of future donations.

6. Provides data for monthly and annual reports needed for evaluation of the hospital transfusion program and blood bank activities.

7. Maintains a running inventory by group, type, and expiration date.

8. Prevents overstocking.

9. Permits return of blood for credit before expiration date.—*E. T. Peterson,* chief, serology section, clinical laboratory service, and *C. B. Nelson, CRL,* chief, medical record library service, both of General Medical and Surgical Hospital, Veterans Administration Center, Los Angeles, Calif.

Armstrong X-P

Explosion-Proof Baby Incubator

THE Armstrong X-P (Explosion Proof) incubator was the FIRST explosion-proof baby incubator ever tested and approved by Underwriters' Laboratories.

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Rare Cells

Exceptional Erythrocytes Show Up in Normal Donors

Small proportions of O, A_2, B, and A_2B cells inagglutinable a priori (by the reagent used), and not rendered so by the experimental operations, can be estimated by an isotope dilution method.

Use of this technic with anti-A reagents indicates that A_1 and A_1B bloods normally contain some RBC in which the A agglutinogen is altered or absent. Such cells are typically present in 1 per 1,000 in adults, though their origin is not yet known. An interesting possibility is that they represent some somatic mutation in erythropoietic stem cells.—*K. C. Atwood, M.D.,* associate professor of medical studies, University of Chicago, Chicago, Ill., and *S. L. Scheinberg, M.D.,* geneticist, USDA, Beltville, Md.

Infant Best Source

Prenatal Diagnosis Difficult In ABO Hemolytic Disease

A variety of factors such as type and titer of maternal antibody, placental permeability, and protective mechanisms in the placenta and the fetus appear to determine the development of hemolytic disease.

Since prenatal diagnosis is problematic due to great variability of antibody patterns in the ABO system, the best diagnostic tests are often those from the infant. The principal danger is bilirubin encephalopathy, which is preventable.

There is no significant progression in severity from one pregnancy to the next, but the current findings of high incidence of O mother and affected first-born infants are confirmed.—*Wolf W. Zuelzer, M.D.,* Children's Hospital of Michigan, Detroit, Mich.

Transfusion Fevers

Febrile Reactions Linked to Pregnancy

When febrile transfusion reactions in women are associated with leukoagglutinins, they seem to be related to prior fetal leukocyte stimulation. Despite a majority who had never been previously transfused or received blood injections, 42 of 2[illegible] pregnant women showed leukoag-

glutinins. The maternal sera agglutinated the leukocytes of the spouses and some of the children, further indicating that the stimulus for leukoagglutinin production seemed to be the leukocytes of the fetus.

In another group it was noted that 8 women with a history of pregnancy developed a reaction on their first transfusion. Ten others showed this type of reaction on their second transfusion. In contrast, there were no men who had a febrile reaction with so few transfusions.—*R. Payne, Ph.D.*, and *M. R. Rolfs*, Stanford University School of Medicine, San Francisco, Calif.

Erythrocyte Lattices

Minority Detection Possible In Red-Cell Population

A minority as small as 1 in 10,000 of the erythrocyte population can be detected and identified using the phenomenon of mixed agglutination.

Widely separated minor-population erythrocytes are caused to form a "lattice" through the medium of specific bivalent antibodies, and characteristic agglutinates are developed. Each agglutinate has as its nucleus one minor-population erythrocyte, and so precise enumeration may be achieved.

The method has been applied with satisfactory results to detection of early growth of bone-marrow transplants, fetal cells in the maternal circulation, and donor cells in the circulation of recipients. —*A. R. Jones, M.D.*, Blood Grouping Laboratories of Boston.

New Reagent

Complement and Specificity Of Coombs' Test

Roughly half of all Coombs' tests can be inhibited by small amounts of gamma globulin. The remainder are insensitive to its presence.

A particular type of red-cell sensitization which takes place only in the presence of serum complement seems to be responsible for the failure of gamma globulin in the nonreactive Coombs' tests.

Since the possibility existed that human complement might be the serological specificity in these tests, rabbits were immunized to complement binding specific precipitates to which human complement had been bound. The immune response proved an exceptionally good reagent for "non-gamma-globulin" Coombs' reactions.—*R. E. Rosenfield, M.D.*, director of the blood bank, Mt. Sinai Hospital, New York City, and *G. V. Haber*, Bureau of Laboratories, Department of Health, New York City.

Decreases Waste

New Solution Aids Handling Of Blood in Heart Surgery

A system employing a new anticoagulant-preservative solution in standard 500 ml. plastic blood donor containers will help prevent waste of fresh heparinized blood collected for heart surgery.

The method requires no special blood bank equipment or blood collection technics, and has yielded satisfactory results in nearly 40 consecutive heart surgery cases. The solution employed is a mixture of EDTA, glucose, sodium gluconate, and magnesium chloride.

Use of donor blood for extracorporeal perfusion has been possible after storage of up to 5 days. Moreover, units of this blood have later been dispensed by the blood bank for ordinary transfusion use after storage periods up to 20 days.—*W. W. Smith, M.D.*, associate in experimental surgery, and *I. W. Brown, Jr., M.D.*, associate professor of surgery, Duke University School of Medicine, Durham, N.C.

The following are abstracts from papers presented at the American Society of Clinical Pathologists meeting, December, 1958. For additional news of the meeting, see last month's issue.

Anesthesia Deaths

Proper Evaluation Vital At Time of Surgery

We assume that most deaths due to anesthesia occur in patients suffering from malnutrition or heart disease. It is the job of the pathologist to return to the records to see whether the surgeon and anesthesiologist were warned of the risk.

What too frequently happens is that the patient's own doctor will say an operation is indicated at the time of examination prior to admission. The operation, however, may take place five or six weeks after his personal physician has checked him, and several weeks after the surgeon has given him a local examination.

The intern or resident who does the preoperative examination is influenced by the admitting diagnosis, and inclined to overlook other symptoms. Even if he does submit findings to the physician or surgeon, their attitude often is: "It took two weeks to get him on the schedule; it will take two more weeks to reschedule; let's go ahead as planned."

One-fourth of the patients who die during induction of anesthesia have received drugs prior to going into the operating room. Barbiturates will depress more than morphine. Muscle relaxants also depress ventilation, and some patients have drug idiosyncrasies.

Is the rate of anesthesia correct, or is it too abrupt in patients who have little tolerance?—*Norman Roberg, M.D.*, associate professor of medicine, University of Illinois College of Medicine, Chicago, Ill.

Anesthesiologist Must Anticipate Trouble

Generally, death is not caused by the anesthesia itself, but by factors working against it. It is these factors we must anticipate. With more heart operations, patients (including children, who are difficult to manage) are greater risks.

We have to know when and how to give anesthesia to these patients. First, we must keep track of time; and second, we must measure the amount of the drug very carefully. Recently, we were told a youngster weighed 80 pounds, but in the interim between examinations and surgery, its weight had dropped to 50 pounds. If the record had not been checked against the fact, an overdose could easily have been given.—*John Lundy, M.D.*, senior consultant on anesthesiology, Mayo Clinic, Rochester, Minn.

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DIAPARENE® PERI-ANAL® has proved highly effective in the prevention and control of perianal dermatitis because it:

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2. **Prevents erythema, desquamation and ulceration of perianal area which commonly occurs from diarrhea and loose stools following oral antibiotic therapy.**[1]
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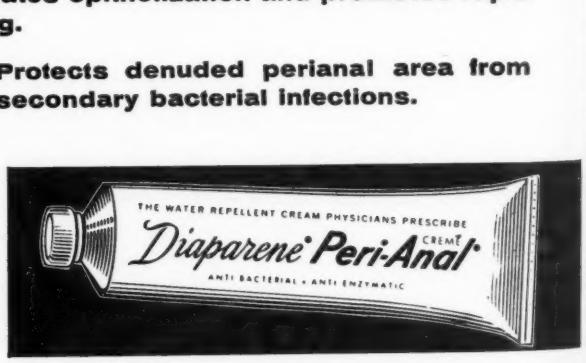

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1. Grossman, L.: Archives of Pediatrics, 71: 173—179, June 1954.

ANOTHER FINE PEDIATRIC SPECIALTY BY BREON

'Play Therapy' Program Helps Child Adjust To Hospital

Pediatrics

By Margaret Rude*

• The hospitalized child is a well child who is temporarily ill. He has the same basic needs as a healthy child—considerably intensified in some areas. Three needs seem to stand out during a child's hospital experience:

1. The need for new experiences tempered with the familiar.

2. The need for a recognition of himself as a person.

3. The need for a normal day within a framework of routine in which he may find a needed security.

The fact that the Springfield Hospital procedure is to admit even ENT elective surgery patients the afternoon before gives us a rare opportunity to lay the groundwork for a better adjustment of the child to the hospital experience by constructively utilizing this time.

Our twofold goal is:

1. To ease the child and his parents of all unnecessary anxieties during his hospital experience.

2. To give the student nurse learning experiences by having her participate actively in the handling of the social and emotional adjustment of the child and his parents during hospitalization.

In order to accomplish these goals, the entire pediatric service should have an understanding of the child's need on the social and emotional levels as well as the physical, and a recognition of what hospitalization means to both parent and child. This, I feel we have to a high degree. It is well known that a hospital experience is often reflected in a child's attitude and habits for months. Our aim is to minimize these disturbances so that he may more nearly accept the experience in his stride.

To meet the first need—that for the familiar—we set up a play area in a large sunroom directly facing the main corridor in the pediatric section. Every child from 1 to 14 years—the age range our program deals with—feels at home in such a setting.

Formerly, this room had some equipment but no consistent supervision—hence, no emotional warmth, without which even the best-equipped playroom has absolutely no constructive value. This room also housed the wheel chairs and tricycles. The child was admitted by a nurse; then he and his parent, if she was able to stay, were more or less on their own.

The wheel chairs and tricycles provided an excellent beginning for races in the corridors, and I marveled that the nurses could stay on their feet. Uncontrolled activity with inadequate equipment in the sunroom led to highly-geared behavior and no real acceptance of the beginning hospital experience.

This same room today has groups of children both morning and afternoon who are constructively active and absorbed in what they find to do. A housekeeping corner, with stove, cabinet, dishes, ironing board, dolls, cribs, carriage, and a trunk for clothes occupies many small children—boys as well as girls. A large set of blocks in shelves made to hold them are used in innumerable ways with small cars, trucks, and trains. Many times they are utilized to make rooms for more housekeeping.

At the other end of the room are shelves with crayons, paper, scissors, clay, play dough, and books suiting the tastes of all ages. There is a large table with a record player, records, games of all sorts, puzzles, Viewmasters, and Tinkertoys.

Tables and chairs to fit different ages are set about the room. Some tables have linoleum tops for clay work, pasting, and painting. There are also wall easels and a large bulletin board where a child may thumbtack the pictures he has made. A wooden rocking-horse is ridden many miles a day, and a beanbag game made for us by a Brownie troop (assisted by their fathers, I am sure, for we have used it every day for three years) interests all, from the small ones, who drop them in the holes, to the older children, who keep score and actually conduct tournaments.

Mobiles hanging from the lights are fascinating for the very young or those in bed. We use seasonal ones which are usually put together by older children. We have a playpen, feeding chair, and small strollers which fit the tables, so that the toddlers, not able to be on their feet, may really be a part of the family group. We aim to have material and equipment which will hold the children's interest without overstimulating them.

(Continued on next page)

*Supervisor of play therapy, Springfield (Mass.) Hospital.

We are well aware that toys and space are not enough to keep children secure and constructively active. Supervision, protection, and emotional warmth are essential. Children actually enjoy the intelligent restriction of an orderly life. They love established routines. When they learn what they may do and what they may not, they become more cooperative and are happier and more secure than when unrestricted.

FULFILLING RECOGNITION NEED

In meeting the second need, that for recognition as a person, the admitting department is most cooperative. We are given a weekly list of the scheduled admissions, checked each morning, which includes the name and age of each child. This gives the floor an opportunity to prepare the rooms with beds properly sized and other necessary touches.

When the play nurse and I are able to call a child by name and have him feel that we were expecting him, this, in itself, starts things off well. The child and parent come to our section usually between 1 and 2 p.m., and are taken directly to the playroom, where the child is meeting the familiar. The student nurse who is assigned as play nurse greets the child and his parent and says she will show them where "Robert's" bed is. He will undress and then come back to the playroom.

Of course sometimes he does not want to leave what he is doing, but, on being assured it will be there when he gets back, he goes. The admitting procedure includes the usual routine and gives the nurse and mother a chance to become acquainted—the nurse to see the mother-child relationship and the mother to watch the nurse establish a contact with the child. The child is quick to accept her as his nurse and turn to her as such.

This procedure is continued until all the children are admitted and back in the playroom in pajamas and bathrobes, actively busy or quietly watching, as their temperament dictates. The play nurse completes her reports at one of the tables, lending her support as needed with either the child or the parent. Many times the support takes the form of a general conversation which provides an outlet for the parent.

The hematology department has helped in developing procedures for doing the necessary blood work. A technician comes directly to the playroom with her basket, sits down at one of the tables, and draws up a second chair, which is quickly named the "Lollipop Chair" by the play nurse. There is quick decision among us as to who shall have the chair. Sometimes we even have children standing in line for it.

We make sure that the child knows there will be a prick, and we say "1, 2, 3" and then the prick. We suggest that everyone say "OUCH" as loudly as possible. Usually the one pricked says nothing and the rest shout.

The play nurse, whom they all know as their nurse, holds a handful of lollipops. The child then picks his favorite color and pops it in his mouth. This helps a great deal, and he returns to his play. Of course the game doesn't always proceed perfectly, but it seems in most cases to be easier in a group and a familiar setting.

After things have settled down, we serve juice and cookies to what is now quite a consolidated small group. We like to have the children want to go to their rooms, perhaps to show something they brought from home. It helps orientation. Without anything ever being said, they always ask whether they may go. This again gives them a chance to look into rooms, see strange things and come back to the familiar.

The double doors to the playroom are always open, and the children get many glimpses of new objects—such as stretchers being wheeled down the corridors—while they are still in familiar surroundings and have the emotional warmth of their mother and their play nurse.

The mothers are welcome to stay until 6 o'clock but make their own decisions as to when is the best time to leave. We try to make sure no parent leaves without telling her child, for while this may bring tears momentarily, it is accepted by the child more easily than facing uncertainty.

The afternoon of play continues. It may include stories or records or just more games and housekeeping. By this time some of the ambulatory patients have come to the playroom to join the group.

MEETING NEED FOR SECURITY

Our program is organized to meet the third need—for routine in which the child may find security. About 4:30 the play nurse suggests that pick-up time has come, and the group assents readily—everyone doing some part. When the room is in order, they go to their rooms with their nurse, where they are toileted and washed for supper. Again as a group they return to the playroom, and supper is served, with the play nurse as a good companion to keep things on an even keel.

The playroom is closed at 6 p.m. The nurse puts the children in their beds with something quiet to do, and after her supper comes back to tuck them in and answer their questions before she goes off duty at 7 p.m.

This continuity of handling through the first day seems to have eased the tension in parents and therefore in children. It is the plan, whenever possible, to put the same student on the next morning with the same group, the preoperative patients. It means much to the children to greet their nurse at 7 a.m., and also to the mothers coming in to be with their children to see the nurse they knew and talked with the day before.

Our second goal is to provide learning experience for the student nurse. During the orientation week with a new group of student nurses, one of the class periods is spent on a discussion of the play program and its importance in the field of child and family adjustment to the hospital experience. We discuss:

1. The meaning of a hospital experience to a child of

a social and emotional level as well as a physical one—not only the break from home, but the new and bewildering hospital procedure. We stress the need for a skeleton of routine.

2. The need for continuity of handling of the child during his first day especially, by someone who saw his mother and talked with her. This pattern of continuity is of equal importance when the parent is unable to stay through the afternoon.

3. The importance of the mother's role in our handling of her child.

4. The fact that the care of materials and the need to have materials in their place are aids to constructive play.

We feel that there is much to be gained in having the play nurse admit the new patient. She ushers him into his hospital experiences, talks with his mother and father, plays with him in the playroom, is with him during supper, and sees him into bed at the end of the day. She has the unique opportunity of "bridging the gap" between home and the beginning of the hospital experience.

Through practical experience during her days assigned as play nurse, she comes to realize the importance of a child's normal day, his need for play and contact with his peers and for contact with a grown-up whom he likes and in whom he can have a feeling of trust, so essential to us all. Then comes his general acceptance of the hospital routine, which makes the experience more rewarding for both the child and the nurse.

One very important aspect of the program is that the children from the beginning know that they share the play nurse, and therefore do not become too attached to or dependent on a nurse of their own. The situation thus is more like life.

The play nurse's hours are from 10 a.m. to 7 p.m. (The play nurse of Monday becomes the floor nurse at 7 a.m. Tuesday.) She and I work together. Her role in the afternoon has already been discussed. In the morning the activities used depend on the age of the group. There is no set program. Around the holidays there is a common interest in making suitable decorations.

PLAY ACTIVITIES

A Monopoly, checkers, or card game interests the older children. We push stretchers close or manipulate wheel chairs so that all who want to may take part. Many like coloring with crayons. The orange paper which comes on x-ray films is excellent for drawing, cutting, or painting. In the morning we take out suitable material which is not usually left in the afternoon. Clay and play dough are very popular, as are the Viewmaster and the record player. The ambulatory children make good use of the blocks and housekeeping materials.

There are always children left in their cubicles who, because of their condition, may not have the group experience. One of us takes these children individually, discusses what they would like to do, and supplies them with material from a large equipment closet kept especially for the bed-patients' use. This takes time, for one does not just give material to a child, but helps him get started or drops around a little later to see how the puzzle is going.

This part of the program is of great importance, for these children need even more the outline of routine they may count on. If it is Mommy they want, they more easily accept waiting if they know that after they have had fun playing, they will wash their hands, have their dinner and a little rest, and then Mommy will come. So many times they reiterate the pattern and then accept it.

The picking-up period in the playroom is a group procedure. It is the children's play area, and they like having it in order. Sometimes during the morning a particularly orderly youngster will spend time taking things out of shelves and putting them in very neatly. Having a place for everything and everything in its place helps the child to gain security. Some young children get more real satisfaction from putting blocks back in a shelf than from building. We have some amazingly interesting work with the blocks, from replicas of the hospital to snow plows which one may sit on. The older children enjoy them immensely.

After washing and toileting, if there is time before dinner is served, someone has always picked out a story he would like to hear. Sometimes we just visit.

Then the dinner cart comes to the door of the playroom. We have the opportunity to have the servings properly sized for each child. Small servings make it a delight to ask for seconds. Group living is wonderful therapy, as the appetites prove. One of us sits with the younger children and helps where needed; the other sits with the older children. After a leisurely meal which is charted by the play nurse, the children are taken to their rooms, where the blinds have been dropped and the atmosphere set for the rest period before afternoon visiting hours.

After our lunch the play nurse and I are ready for the new group arriving to be introduced to the playroom.

No two days are alike or predictable, but there is always the challenge to make the child's day one free from emotional strains, fears, and homesickness, and in this way develop normal, wholesome attitudes toward the hospital experience. We are finding that children are increasingly well prepared by parents. We have many contacts with apprehensive parents before admission, requests coming from doctors, the admitting office, or even from parents themselves who know the program. We also do much follow-up work.

We are convinced that hospitalization well handled by parent and staff can be a constructive learning experience for a child. We see enough children come back a second time, skipping down the corridor calling, "Remember me, I was here before"—to know that some good can come to the total child beyond his physical improvement.

OB DEPARTMENT

Informative Pamphlets Makes Patients' Stay More Pleasant

• Slightly more than 1,800 maternity patients (1,878 in 1957) each year for the last four years have left the Charles T. Miller Hospital, St. Paul, Minn., with a recollection of a hospital stay that was both informative and pleasant, thanks to a system of pamphlets and schedules.

The system is simple, almost cost-free, yet it saves hours of valuable nursing time, makes patients more cooperative, and prepares them for the job of mothering a new baby when they get home.

Instituted four years ago by Cecilia Grabow, R.N., head nurse on the postpartum floor,* with the help of Phyllis Lee, R.N., supervisor- nstructor, and her predecessor, Mrs. Helen Merrill, R.N.; Elizabeth Kraft, R.N., head nurse in the nursery; and Margaret Pfund, R.N., head nurse in the labor and delivery room, the system of mimeographed bulletins and pamphlets grew out of a real need.

*Miss Grabow is now assistant obstetrical supervisor and instructor.

Miss Grabow explains: "Patients hesitated to ask questions about their care—felt nurses were too busy. Most grumbled over things they didn't understand, and complained to doctors that care differed from previous instructions by physicians. Some patients were wandering off, taking sitz baths by themselves. The situation was a confused one.

"We tried oral orientation, of course. But that takes time. Often the patient forgets salient points or will get conflicting instructions from different nurses. So we decided to put in writing everything we could think of that would inform the patient—keep her advised of what we were doing and of the various medications, treatments, and services available to her."

The pamphlet series begins with a clever, illustrated booklet entitled "Happy Birth Day." This is also used in parents' classes. Some doctors have requested copies for distribution to patients. Not infrequently, an expectant father will be seen perusing a copy as he frets his way through the delivery period.

Since many patients arrive at the hospital in the early stages of labor not fully comprehending the process or their own role in the various stages, the booklet is often very helpful to the patient in labor. It describes correct breathing, details each step in the three stages, and does much to calm the fears and nervousness of the first-time mother.

For many new mothers, the delivery room itself is a mystery—thus, while contractions are in the beginning stage she can look over the paragraph which describes the procedure in the room:

"When you are on the delivery table there will be a nurse or doctor with you at all times. You will be put into position for delivery, lying on your back with legs in leggings, up in stirrups. There will be handles for your hands to grasp, and your hands will be in wristlets to keep your hands from contaminating the delivery area."

(Continued on page 102)

Cecelia Grabow, R.N., now assistant obstetrical supervisor, presents Miller Hospital pamphlets to a maternity patient. Having information and schedules in print saves valuable nursing time, adds to patients' understanding of hospital routine, medical care.

Now...
Micro-Filtered Air for the No. 1 Croup Tent

Continuous recirculation of fresh, cool, moisture-saturated air, an exclusive feature of the CROUPETTE®, "is important in the care of babies with lower respiratory infections."[1]

First "cool vapor" croup tent, the CROUPETTE is used in more than 83% of all hospitals in the U.S. accredited for residency training in pediatrics, including all those affiliated with U.S. medical schools. Compact, portable, easy to set up or store, with no moving parts, the CROUPETTE is as simple to operate and maintain as it is clinically safe and efficient.

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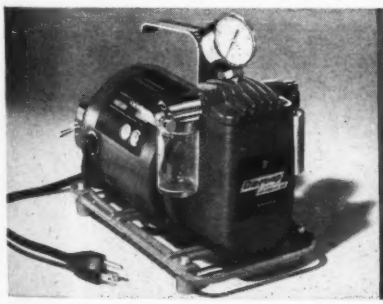
1. Kirkwood, E. S.: Nursing World 129:8, 1955. 2. Ranger, I. & O'Grady, F.: Lancet 2:299, 1958.



DIA-PUMP compressor (Model EFC), for continuous operation at low cost, delivers MICRO-FILTERED air at controlled positive pressure to 30 pounds per square inch.

Visibility, accessibility and simplicity are CROUPETTE features. Cool, MICRO-FILTERED, moisture-saturated air provides ideal atmosphere for therapy of respiratory infections.

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(Continued from page 100)

After delivery, when the patient has been installed in her own room, a nurse will give her two more booklets. One, titled "Mother Matters," comes with a pink or blue cover, a touch which almost every patient comments upon with appreciation. In this booklet is, first of all, a warmly congratulatory message, followed by a complete schedule of the hospital day.

"The maternity patient *does* receive a great deal of care, and correlated with her care is the care of the new baby, which makes a full day," Miss Grabow points out. "But, if the patient is cognizant of the schedule, it ceases to seem hurried, confused, and demanding."

Coupled with knowledge of the schedule is another unifying factor: team nursing has replaced functional nursing. The patient, having the same nurse tending her for eight consecutive hours, has a definite sense of organization.

"Mother Matters" is revised frequently, after conferences with obstetricians registered at the hospital and nurses on duty there to be sure that all points are covered and that anything new in the way of treatment is touched upon.

"We have made this booklet as detailed as possible," Miss Grabow says. "We have had patients here just out of high school, and we have some who come in after a number of years between babies and find procedures considerably changed. So we put in everything, from the fact that 'pain pills' are available, not just for 'after pains' but for any discomfort the patient may experience, to a listing of visiting hours and the best exit to use when patient and baby are released."

Recently added to the booklet is a paragraph inviting patients to consult with any of the nurses or supervisors on questions or problems troubling them. "With the time saved from the routine of orienting patients verbally, we have more time to devote to a personal approach to patient care," Miss Grabow says. "This can often be very important, relating to the patient's physical well-being."

She has listened and helped with problems ranging from "My other children have the measles; I just don't know what to do about taking the baby home" to "I've been told my baby is handicapped. Is there anything to be done?"

Often the hospital finds a temporary housekeeper to help through a home situation, or it will keep the baby for a few days while the mother goes home to cope with the problem. The staff is, of course, conversant with all the services and facilities available for the handicapped child. Also, it frequently recommends a call to a special organization at the University of Minnesota, where a specialist will answer any questions related to heredity and congenital malformations, for parents of a handicapped child who want to know how likely it is that they will have another similarly handicapped.

Sometimes the problem is a personal one, the patient expressing a need "just to talk to another woman."

Along with "Mother Matters," which clears up most questions and informs the patient on most aspects of her hospital stay, she gets a booklet on

"If they'd looked more closely, they'd have seen the chart said *Myrtle* Monroe."

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BELOIT, WISCONSIN

her choice of breast or bottle feeding. These serve still further to fill in any gaps in patient knowledge. The breast-feeding manual contains the patient's individual schedule jotted down on a special page for that purpose, worked out on the basis of her milk supply, the baby's weight, and any other pertinent factors. This is checked over with her by one of the nursery nurses.

There is also a fact sheet on bathing the baby. From time to time, Miss Grabow orders reprints made of pertinent comments by obstetricians, child psychologists, nutritionists, and other authorities.

Commenting on the pamphlet system, one obstetrician said that it is a great time-saver for doctors, and goes far toward introducing a patient to new technics in postpartum care. "Early ambulation, tub baths, etc., are more cooperatively received and their purpose better understood this way," the doctor said. "The printed explanation is always better—then, if the patient has any questions, she can refer to the manual."

The hospital also encourages follow-ups. Patients are urged to give the hospital a call about any problems that come up after the return home. "Naturally we cannot answer questions that call for an individual answer from the pediatrician or family doctor, but we can answer many general questions satisfactorily, thus saving the doctor's time and keeping the parents from seeking information from unqualified sources," Miss Grabow says.

In addition to questions which are more or less expected—what to do for diaper rash, how to take a rectal temperature, what is the proper procedure at some point in the process of terminal sterilization—the hospital gets a wide variety of off-beat queries. Samples: What caused the bottles of formulas to explode? (Answer: Capped too soon and too tight.) Could I have your recipe for chocolate cake? (Always obliging, the hospital furnished the recipe, after cutting down to family size a recipe that serves 49.)

"The old concept of arbitrary hospital care is gone," Miss Grabow contends. "We feel if a patient is intelligent enough to care for and guide another human being, she is intelligent enough to be given any information about her care. If a patient asks—and often just routinely—we are glad to tell her what the medication is for—by name or by purpose. This not only contributes to the patient's knowledge and peace of mind, but often averts some complications—for example, a patient may know that she is allergic to a certain drug and, informed of the content of the medication offered her, can then refuse it."

The information program has promoted such desirable practices as breast-feeding, rooming-in, and early ambulation and, in general, has made the patient more aware of recommended procedures in health and child care.

Miller Hospital has a capacity of 44 in the postpartum section, and 46 in the nursery.

Birthweight May Determine Demand for Night Feeding

A study in Middlesex, where demand feeding is encouraged, showed that of 55 babies whose weight was less than 6.5 pounds at birth, only 9 percent had never had a night feeding. In comparison, 52 percent of 63 babies who weighed more than 8 pounds at birth never demanded a night feeding, reports *Lancet*.

These differences disappeared by the age of 3 months —91 percent of the smaller babies and 89 percent of the heavier babies had ceased their night feedings.

Team Studies Adaptation of Humans To Pregnancy at High Altitudes

Special studies of pregnancy in very high altitudes are being conducted in the Peruvian Andes by a team of six doctors, two from Yale University School of Medicine, one from Harvard Medical School, one from Boston University School of Medicine, one from the University of Florida College of Medicine, and one from Johns Hopkins University School of Medicine.

Their expedition has as its object the study of how human beings and animals living in such altitudes have made the biologic adjustments necessary to supply oxygen to the unborn fetus.

So far as is known, according to the *New England Journal of Medicine*, the llama, the alpaca, and even the vicuna are exhilarated rather than depressed by the effects of living in high altitudes, and it is suspected that the same may be true of the Incas.

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Your credentials will be carefully evaluated in an individual situation, and only if you qualify will you be recommended. Our proven method shields both employer and applicant from needless interviews, for we screen positions too.

Perhaps you are quite satisfied with your present position. On the other hand, if an opening occurs for which you are ideally suited, you—being an ambitious person—would like to have an opportunity to consider it. Filing your credentials with us would give you that opportunity—perhaps now, perhaps one year, two years, five years from now.

We do not advertise specific available positions, but we have many interesting openings. Our listings are confidential.

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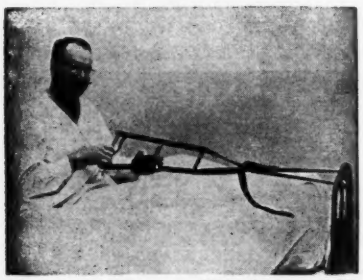

The New Posey "Patient Aid"
The new Posey "Patient Aid" is another rehabilitation product which encourages self-exercise and is a positive aid to the geriatric. The patient can raise himself without calling for the nurse.
Catalog #B-654 (For open end beds) $5.95 each. Catalog #B-654A (For beds with solid foot ends) $5.95 each.

Posey Patient Support
Standard Model: PP-753, $6.75.
Adjustable Model: PP-154, $7.50.
Gets your patient out of bed . . . useable with both wheelchairs and conventional chairs.

McDonald Restraint
Standard Model: P-4147, $6.15. Extra-heavy model: P-353. Riveted construction with keylock buckles, $19.80 each. Keeps patient in bed.

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(Continued from page 7)

among people who had pre-existing chronic disorders. Especially vulnerable were middle-aged and older people with chronic heart diseases.

New Device May Enable Blind to Read Printing

A new device with which the blind can read ordinary printed material such as books and magazines has been developed by Battelle Memorial Institute, Columbus, O., under contract with the VA.

The portable unit, called an "aural reading machine," produces musical tones similar in sound to chords played on an organ. As its photocells "see" the black patterns of printed characters, corresponding tones are produced by the machine. By interpreting these tones, trained users may "listen" to the printed word and attain a "reading" speed of from 15 to 30 words a minute.

The machine's advantage over Braille is that the blind can make use of normal print, including typewritten business correspondence. It will thus offer them new adaptability for the reading demands of office work and schooling.

Machine Wired to Heart Enables Normal Life

A $385 machine has been wired to the heart of Ray Hunt, Arizona cotton farmer, giving him a chance for normal life.

The eight ounce, portable device introduces current into his heart, increasing its beat to 70 times a minute, compared to its previous rate of 10 beats a minute—or, sometimes, even complete stoppage for as long as 20 to 30 seconds.

The only solution to this type of problem used to be a device known as a "pacemaker" which introduced current into the heart from a machine plugged into an electrical outlet. It was bulky, painful, and required that the patient be confined to bed.

Mr. Hunt's box is just 4" x 2½" x 1", and operates on a 6-volt battery that requires charging every 490 hours.

A spokesman said the operation performed on Mr. Hunt was believed to be the third of its kind in the world. The first two were performed in July at the University of Minnesota. He added that as long as the machine's battery is kept charged, Mr. Hunt will be able to maintain normal activity.

Trouble Lurks Ahead For Eager Egg-Eaters

People who eat two or three eggs for breakfast may be headed for trouble, according to Frank B. Kelly, M.D., University of Illinois medical instructor.

Dr. Kelly told the Michigan State Medical Society annual meeting that eggs are the worst offenders among the causes of atherosclerosis and coronary heart disease.

Eggs are a main source of cholesterol in our diet and cholesterol is the fatty substance that plugs arteries and always is present in atherosclerosis cases.

Dr. Kelly said one egg contains as much cholesterol as a quarter pound of butter and he suggested substitutes of lean meat for eggs at breakfast.

Transistor Radios May Be Key to Atomic Survival

Transistor radios, equipped with radiation meters, may be the key to personal survival in the event of a nuclear attack, according to Willard F. Libby, Ph.D., commissioner of the Atomic Energy Commission, Washington, D.C.

Commissioner Libby told the American Medical Association's Council on Foods and Nutrition at the University of Wisconsin, that a good communication system is vital during a nuclear attack. The best equipment, he said, is a transistorized battery-powered radio. These radios also should be equipped with radiation meters.

Since fallout cannot be seen, the only way to realize its presence is by means of such meters and it is very important, the commissioner added, for each person to know the total dose of radiation to which he has been exposed. This can only be measured with meters which are kept on the person and interpreted periodically.

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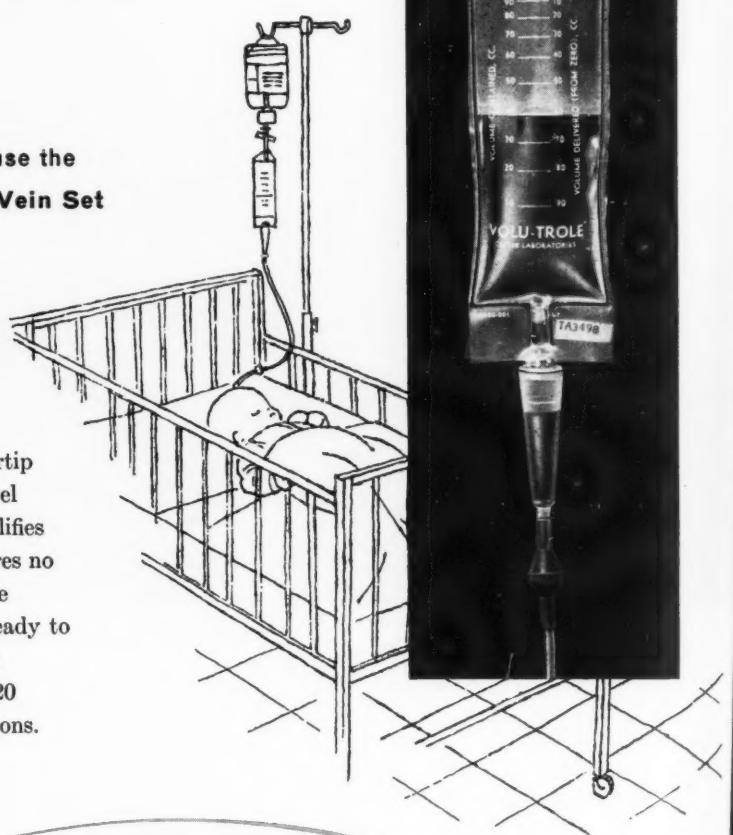
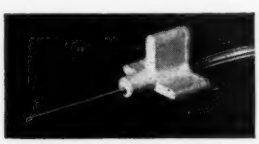


and for safer,
easier needle insertion, use the
Cutter Pediatric Scalp Vein Set
with the **Saftigrip™**



Saftigrip provides easy fingertip control, holds the needle bevel in correct position, and simplifies insertion. Infusion Set requires no head restraints. Baby is more comfortable. Set is sterile, ready to use. Available with 23 gauge needle for fluid infusions or 20 gauge needle for blood infusions.

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HOSPITAL Topics OR

Official bulletin for the
Association of Operating Room Nurses

They'll Make You Feel At Home in Texas

• As friendly as the traditional "coffee klatch" is the welcome awaiting you in Houston . . . and here are the persons primarily responsible for serving up large portions of Texas hospitality at the sixth AORN congress.

Members of the hospitality committee, they are (l. to r.): Sister M. Margaret, O.R.S., St. Joseph's Hospital; Mrs. Marian White, R.N., St. Elizabeth's Hospital; Dorothy Kossa, R.N., Methodist Hospital; Margrethe Lyngholm, O.R.S., Memorial Hospital, committee chairman; Sister M. Albertine, R.N., St. Joseph's Hospital; and Fongee Jew, R.N., Memorial Hospital. Not pictured are Caroline Denman, R.N., St. Luke's-Texas Children's Hospitals, and Evelyn Jerabek, R.N., M. D. Anderson Hospital.

"No one is a stranger" is the motto of the hospitable Houstonians. "Don't be afraid to come alone to the AORN," they say. "You won't be alone after you get here."

For additional details on the congress, please turn the page. The final program appears on pages 116-118.

The President Says:

Dear Members:

Your national officers sincerely hope you had a happy holiday season, and are now making plans for your anticipated trip to the sixth AORN congress in Houston in February.

Much time has been spent by busy, active operating-room nurses in the careful planning of the scientific program. The Houston group has made every effort to present a well-rounded program with something of interest to every O.R. nurse. We think they have succeeded. If you review the final program on pages 116-118, we believe you'll agree.

Before you come to the meeting, we hope you'll acquaint yourself with your national bylaws, including the recommended revisions that were presented at your December meeting.

If you have any suggestions or recommendations for the betterment and or continued success of your national association, please let us have them, along with any suggestions for the 1960 congress.

We're looking forward to greeting returning members, and hope to meet many new ones, too. Best wishes for a prosperous New Year.

Sincerely,

Pauline R. Young, R.N., President
Association of Operating Room Nurses

WHAT TO SEE AND DO IN HOUSTON

An AORN registrant's free hours are pretty well booked up once the congress gets under way (see list of events on social calendar on opposite page). But for those coming to town a day or so ahead of time or staying after the congress, the entertainment committee says the following events will be available that week:

Music Hall, Sunday, February 8—Mary Martin in "Peter Pan."

Playhouse Theatre, week of February 9—"Visit to a Small Planet" or "The Four Poster."

Music Hall, week of February 9—concert by the Houston Symphony Orchestra, with Sir Thomas Beecham conducting.

Events to be featured at other legitimate theaters had not yet been announced when HOSPITAL TOPICS went to press.

Those who have cars available and are interested in Texas' historic past may want to visit nearby San Jacinto State Park, site of the Texans' victory over the Mexicans, in 1836, which resulted in the creation of the Republic of Texas. The park includes the San Jacinto Monument, tallest memorial monument in the world (570 feet), the San Jacinto Museum of History, and the U.S. battleship Texas, which served in both world wars.

WHERE TO DINE

Besides the dining facilities at the Shamrock-Hilton, there are several nearby restaurants which Houston members suggest for lunch or dinner: **Angelo's Restaurant and Oyster Bar, Bill Williams' Chicken House, Christie's** (seafood), **Ding How** (Chinese and American food), **Ship Ahoy**, and **Kaphan's**, at all of which prices in the medium range prevail; **Valian's**, which serves pizza at moderate prices; and the **College Inn** and **Vincent's** (Italian), both of which are more expensive.

There are many good restaurants in downtown Houston and in outlying areas, for those who have cars available and want to go out.

WHAT TO WEAR

February is usually the coolest month of the year in Houston—but the temperature rarely drops below 40°. Houston residents suggest that nurses bring medium-weight suits and dresses and at least one coat, also medium-weight. Rainwear might come in handy.

LAST-MINUTE TRAVELERS URGED TO COME AHEAD

Nurses who don't know until the last minute that they can go to the congress should come ahead, even though they haven't had an opportunity to make a reservation, say local committee members. Accommodations will be found for them.

If the several hundred rooms which the Shamrock-Hilton is holding for AORN members are all taken, there are excellent accommodations available in nearby hotels and motels.

It is suggested that any nurse who would like to share a room with another AORN registrant may give this information to the hotel clerk when she registers.

A special invitation has been issued by Texas Southern University to all Negro nurses attending the congress. Excellent new accommodations in single or twin-bed rooms may be reserved by writing directly to Dean Ina Bolton at the university. Campus is shown at right.

ROUND-TRIP AIRLINE RATES TO HOUSTON FROM:

	First Class	Day Coach	Night Coach
Seattle	$314.27	$249.47	*
San Francisco	257.84	176.21	*
Los Angeles	211.64	143.10	*
Denver	146.41	110.88	*
St. Louis	121.33	82.28	*
Chicago	156.97	122.21	$107.47
Detroit	177.43	116.60	*
New York	224.95	165.11	146.63
Boston	249.15	183.92	163.57
Montreal	258.06	*	186.34
Washington, D.C.	194.37	143.00	126.94
Miami	153.23	116.16	111.43
New Orleans	50.27	38.83	32.45
Atlanta	116.93	85.58	76.89
Newport News	200.09	*	*
Philadelphia	222.75	160.16	143.66
Pittsburgh	185.68	*	*
Cleveland	207.13	150.48	141.79
Butte	271.37	*	*
Helena	289.63	*	*

Fares are subject to change without notice.
*None scheduled as we went to press.

R.N.'S, STUDENT NURSES MAY ATTEND

All registered professional nurses, whether or not they are in the operating room, are invited to attend the sixth national AORN congress, according to Edith Dee Hall, R.N., national executive secretary. Professional nursing students are also eligible to attend.

However, practical nurses, technicians, and other nonprofessional nursing personnel are not eligible for admission, Miss Hall pointed out.

HOSPITALITY ROOM PLANNED

A hospitality room is being planned particularly for the convenience of nurses not staying in the hotel. The room will be on one of the lower floors of the Shamrock-Hilton.

CONGRESS SOCIAL CALENDAR

All nurses registered at the congress are invited to attend the following social events:

Sunday afternoon, February 8—Fashion show, given by Bauer & Black.

Monday evening, February 9—Exhibitors' Night party, given by all exhibitors. A chuck-wagon supper, plus entertainment and dancing.

Tuesday, February 10—dinner and floor show, given by Ethicon, Inc.

In addition, breakfasts and a dinner are planned for Catholic Sisters.

Philadelphia AORN members are engaged in various fund-raising projects to help defray the expenses of sending the group's delegates to the Houston congress. Each hospital represented in the AORN membership is responsible for raising $25 to be donated to the AORN treasury. Among the projects are cake sales, cosmetic sales, and bazaars. At right are three members of the special events committee (l. to r.): Sally Finderson, R.N., and Barbara Stelwagon, R.N., clinical instructor, both of Hahnemann Medical College and Hospital; and Esther Miller, O.R.S., Children's Hospital, committee chairman. Not shown are Betty Hazen, O.R.S., Episcopal Hospital, and Mrs. Isabelle Barr, O.R.S., VA Hospital, Wilmington, Del.

Dr. Walter to Speak at Special CSR Session

• Carl W. Walter, M.D., associate clinical professor of surgery, Harvard Medical School, and surgeon, Peter Bent Brigham Hospital, Boston, will be the featured speaker at a special one-day session for nurses in central service departments, on Monday, February 9.

This is the first time the AORN has offered a special program for CSR nurses, although they have been invited to attend sessions of interest to them at previous AORN congresses.

The complete program for this session appears on page 127 of this issue.

Other "firsts" at the Houston congress:

(1) Closed-circuit telecasts.

(2) A new type of program for the fourth day of the congress, replacing the hospital tours offered for the last three years. Features of the Thursday program will be the premiere showing of a film, "The Role of the Operating-Room Nurse in Cardiac Surgery," followed by a closed-circuit telecast of actual surgery from the M. D. Anderson Hospital.

The film was produced at St. Luke's Episcopal-Texas Children's Hospitals, Houston, under a grant from and with the assistance of Surgical Products Division, American Cyanamid Co., which is also aiding in the telecast presentation.

The actual heart surgery to be shown on the telecast will be performed by Denton A. Cooley, M.D., associate professor of surgery, Baylor University College of Medicine, assisted by the surgical staff from that school and the nursing staff from St. Luke's Episcopal-Texas Children's Hospitals.

Hospital tours are being discontinued this year because both national and local AORN officials do not want to take any risk of exposing Houston hospital patients and personnel to possible infection which might be introduced by a large number of visitors.

(3) Round-table discussions on sterilization which will give nurses an opportunity to put their questions to qualified consultants in the more informal and personal setting of a small group (see below).

Round-Table Discussions

• Twelve round-table discussions on sterilization of supplies will be held concurrently on Tuesday and Wednesday mornings, beginning at 8 o'clock. Each of the 12 tables will seat one consultant, one discussion leader, and eight operating-room nurses. Therefore 96 nurses can be accommodated in the room at one time.

The morning will be divided into three 45-minute periods, enabling each nurse attending to choose tables on three different subjects. At the end of a period each nurse moves to another table, designated by the color and number on the card she holds. Consultants and leaders remain at original tables.

Subjects and consultants at each table are:

Table I—"Chemical Disinfection"—Emil G. Klarmann, Ph.D., Lehn & Fink Products Corp.

Table II—"Dry-Heat Ovens and Water Sterilizers"—Ethel I. West, R.N., O.R.S., Methodist Hospital of Southern California, Arcadia.

Table III—"Tests and Cultures Indicators"—Vincent Romito, Aseptic-Thermo Indicator Co.

Table IV—"Autoclaves"—John J. Perkins, American Sterilizer Co.

Table V—"Ethylene Oxide Gas"—John C. Gabel, Wilmot Castle Co.

Table VI—"Chemical Disinfection"—Earle H. Spaulding, Ph.D., Consultant, Becton, Dickinson and Co.

Registration for these sessions must be made between 11 a.m. and 3 p.m. Monday, at a special desk in the registration area.

Table VII—"Electron Beam"—Charles Artandi, Ph.D., Ethicon, Inc.

Table VIII—"Tests and Cultures Indicators"—George Reddish, Ph.D., Consultant, Vestal, Inc.

Table IX—"Dry-Heat Ovens and Water Sterilizers"—Edna A. Prickett, R.N., American Sterilizer Co.

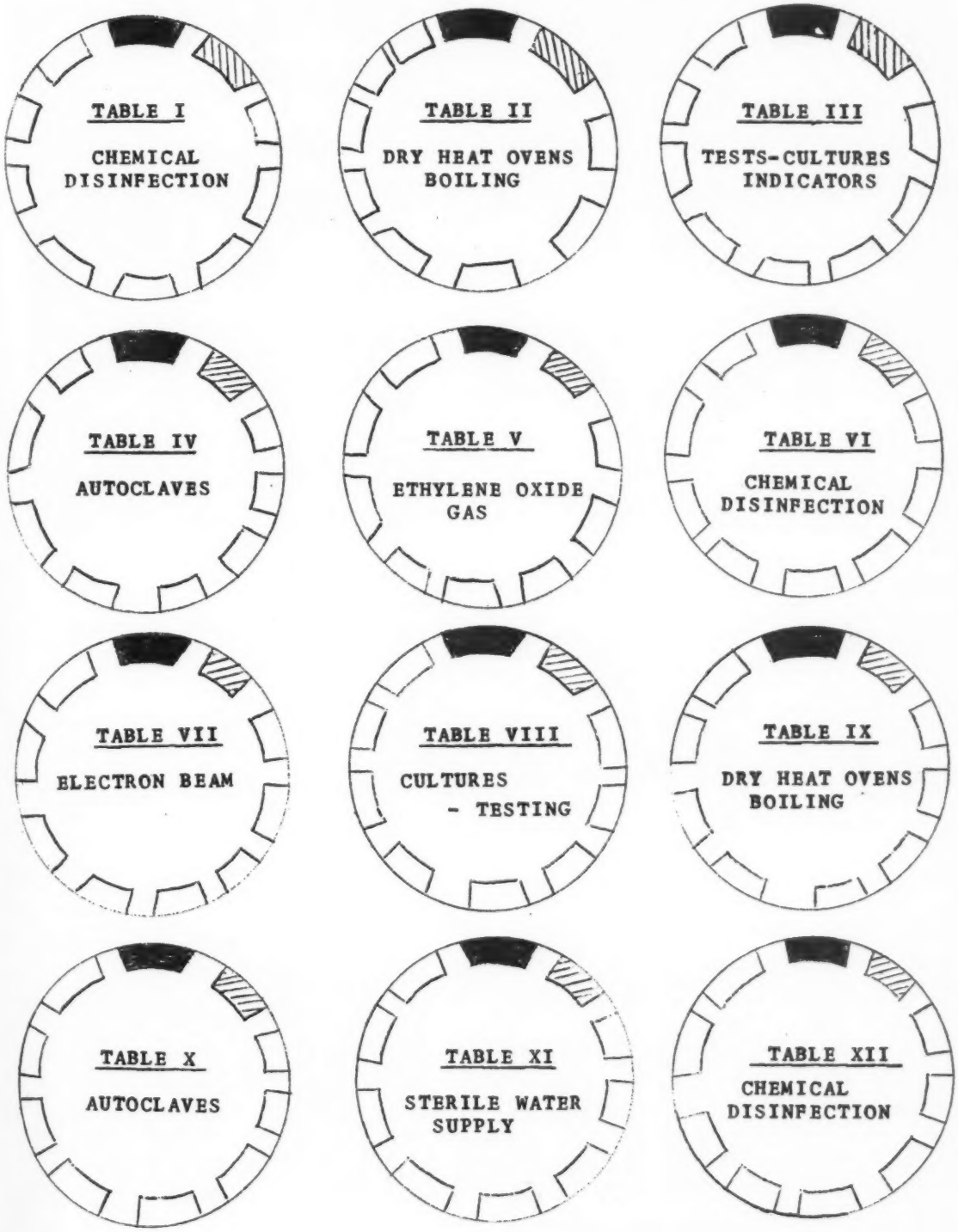
Table X—"Autoclaves"—M. G. McBane, Wilmot Castle Co.

Table XI—"Sterile Water Supply"—H. P. Hamrock, MacBick Co.

Table XII—"Chemical Disinfection"—Velma Chandler, Ph.D., Ethicon, Inc.

See diagram on opposite page.

ROUND TABLE DISCUSSIONS ON STERILIZATION OF SUPPLIES
AZALEA AND BLUEBONNET ROOMS - EXHIBIT HALL
TUESDAY AND WEDNESDAY - 8:00 - 11:00 A. M.

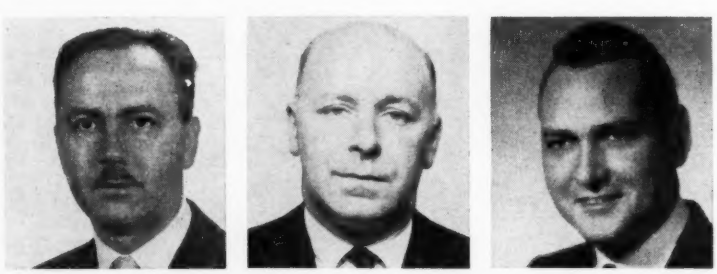


INTRODUCING YOUR AORN SPEAKERS

Panel on Problem Clinics

Participants in one of opening panel discussions, "Problem Clinics for Small Hospitals," will be (l. to r.): Earl W. Clawater, Jr., M.D., Medical Center Hospital, Tyler, Tex.; Sharon S. Storey, Jr., M.D., director of anesthesiology, Heights Hospital, Houston; Horace M. Cardwell, administrator, Lufkin (Tex.) Memorial Hospital; Dorothy G. Swickheimer, R.N., nursing administrator, Citizens Memorial Hospital, Victoria, Tex.; and Mavis O. Pate, R.N., operating-room supervisor, Medical Center Hospital, Tyler, Tex. Not shown is Margaret Ponds, R.N., director of nursing, Heights Hospital, Houston, moderator.

Sterilization of Supplies



Pictured above are some of the consultants who will participate in round-table discussions on methods of sterilization. They are (l. to r.): Charles Artandi, Ph.D., manager, chemical development department, Ethicon, Inc.; Henry P. Hamrock, field consultant, The MacBick Co.; and M. G. McBane, district manager, Wilmot Castle Co.

Panel on O. R. Nurse Supply

Speakers in the panel discussion, "Roadblocks to the Supply of Graduate Nurses in the Operating Room," will be (l. to r.): R. Lee Clark, Jr., M.D., director and surgeon-in-chief, M. D. Anderson Hospital and Tumor Institute, Houston; Charles R. Allen, M.D., professor and chairman, University of Texas Medical Branch Hospitals, Galveston; Faye Pannell, R.N., dean, Texas Woman's University College of Nursing, Denton; Virginia M. Brantl, R.N., associate professor and chairman, department of medical-surgical nursing, University of Texas Medical Branch, Galveston; and Sister Mary Giles, R.N., surgical supervisor and instructor in operating-room nursing, St. Mary's Hospital, Kansas City, Mo. Not shown are Mary V. Schwendeman, editor, "ORS"; Mary Roberts, R.N., ORS., VA Hospital, Dallas, Texas; and Alice R. Clarke, R.N., editorial consultant, Hillsdale, N.J.

Participating in the panel discussion, "Radiation Protection," presented by the staff of M. D. Anderson Hospital and Tumor Institute, Houston, will be (l. to r.): Warren K. Sinclair, Ph.D., head, department of physics, who will speak on principles of radiation protection, and Renilda Hilkemeyer, R.N., director of nursing, who will speak on nursing responsibility for radiation and patient care. Maj. Jeanne B. McCormick (ANC), operating-room instructor, Brooke Army Hospital, Fort Sam Houston, will discuss the applicatory phase of the Army O.R. technician program in the panel discussion on teaching programs.

Speakers for program on "Today's Problem of Infections" will be Philip B. Price, M.D. (l.), dean, University of Utah College of Medicine, Salt Lake City, who will discuss hand scrubs and skin preparation; and Ellard M. Yow, M.D., professor of medicine, Baylor University College of Medicine, Houston, who will speak on management prevention and control.

Right (l. to r.): Emil G. Klarmann, M.D., vice-president, Lehn and Fink Products Corp., will be a consultant on chemical disinfection in a sterilization round-table. Helen Creighton, R.N., J.D., assistant professor, Georgetown University School of Medicine, Washington, D.C., will discuss malpractice suits and insurance coverage for O.R. nurses, and Fred Guilford, M.D., clinical assistant professor of otolaryngology, Baylor University College of Medicine, Houston, Texas, will speak on "Restoration of Hearing by Surgical Technics."

Alton Ochsner, M.D. (l.), professor of surgery, Tulane University School of Medicine, New Orleans, will speak on carcinoma of the lung, and Louis J. Girard, M.D., professor of ophthalmology, Baylor University College of Medicine, Houston, Texas, will speak on recent developments in ocular surgery.

Sister M. Margaret Kelly, R.N., supervisor of special surgery, St. Joseph's Hospital, Houston, will participate in the symposium, "Pitfalls in the Planning of an Operating Room Suite." Robert A. Kolvoord, head, medical communications, M. D. Anderson Hospital and Tumor Institute, Houston, will cooperate in the presentation of two closed-circuit telecasts from the hospital.

Nominees for AORN Offices

PRESIDENT

Young

West

TREASURER

O'Donnell

Sasse

Pauline R. Young, R.N. (for re-election)—O.R.S., Hahnemann Medical College and Hospital of Philadelphia; president, national AORN and AORN of Philadelphia; member, committee on hospital operating rooms, National Fire Protection Association; member, nominating committee ISNA section, American Nurses' Association; vice-chairman, ISNA section, Pennsylvania Nurses' Association.

Ethel I. West, R.N.—O.R.S., Methodist Hospital of Southern California, Arcadia; member, board of directors, national AORN; research committee, national AORN; research and historian committee, Los Angeles AORN; nurse consultant, handbook on "Sterilization and Disinfection"; past president, Los Angeles AORN.

Kathryn L. O'Donnell, R.N.—chief nurse, Overholt Thoracic Clinic, Boston; member, board of directors, Massachusetts AORN; past treasurer, Massachusetts AORN; member of the local committee for the third national AORN congress in Boston in 1956.

Anne D. Sasse, R.N. (for re-election)—treasurer, national AORN; member, board of directors, New York City AORN; charter member, board of directors, and past corresponding secretary, New York City AORN; formerly assistant operating room supervisor, New York Polyclinic Hospital, New York City.

BOARD

(Choose three of six)

Walk

Regester

Pendleton

Volpe

Doris H. Walk, R.N. (for re-election)—operating-room supervisor, Memorial Hospital, Belleville, Ill.; member, board of directors, national AORN; president of alumni, St. Louis City Hospital Training School for Nurses; organizer and first president of St. Louis AORN; one of the original members of the national AORN planning committee.

Mabel E. Regester, R.N. — administrative supervisor, operating room, Church Home and Hospital, Baltimore; member, Maryland State Nurses' special conference group of operating room nurses; member, board and program committee, Baltimore AORN; chairman, budget and finance committee, national AORN.

Ruth E. Pendleton, R.N.—director, surgeries, recovery and central supply room, New England Deaconess Hospital, Boston; member, board of directors, national AORN (named to fill the unexpired term of the late Evelyn Ellsworth); past president, vice-president, treasurer, and board member, Massachusetts AORN; member of the local committee for the third national AORN congress in Boston in 1956.

Barbara Volpe, R.N. — operating-room supervisor and instructor, Manhattan Eye, Ear, and Throat Hospital, New York City; treasurer, New York City AORN; chairman, bylaws committee, national AORN; former board member, New York City AORN; and past secretary, faculty council, Manhattan Eye, Ear, and Throat Hospital.

Ellison

Marie B. Ellison, R.N.—supervisor, operating room and recovery room, St. Luke's-Texas Children's Hospitals, Houston; member, board of directors, Houston AORN; past president, Houston AORN; past chairman and board member, Texas Conference of Operating Room Nurses; and charter member, Little Rock (Ark.) operating-room nurses' association.

Marrion Anderson, R.N. — operating nurse-technician, cardiac and intra-cardiac surgery, and in charge of the surgery research laboratory, Children's Hospital of the East Bay, Oakland, Calif.; president, AORN of Alameda and Contra Costa Counties; past supervisor, urological department, Emanuel Hospital, Portland, Ore.; former head nurse, Merchant Marine Rest Center, Millbrae, Calif.; past member, board of directors, District 1, Oregon Nurses' Association.

Anderson

NOMINATING COMMITTEE

Nisenson

Peers

(Choose three of six)

Bredenkamp

Hunsberger

Naomi Nisenson, R.N.—operating-room supervisor, Montefiore Hospital, Bronx, N.Y.; formerly assistant supervisor and clinical instructor, Beth Israel Hospital, New York City; member, New York City AORN.

Jerry Peers, R.N. — operating-room supervisor, UCLA Medical Center Hospital, Los Angeles; president, Los Angeles AORN; formerly clinical instructor and assistant operating-room supervisor, University of Michigan Hospital, Ann Arbor and operating-room supervisor, VA Hospital, Ann Arbor; chairman of the scientific exhibit committee for the fourth national AORN congress in Los Angeles.

Barbara Bredenkamp, R.N.—assistant to operating-room supervisor, VA Hospital, Denver, Colo.; president, Denver AORN.

Beatrice Hunsberger, R.N.—operating-room supervisor and instructor, Methodist Hospital, Philadelphia; member, board of directors, AORN of Philadelphia.

Imogene Creber, R.N.—operating-room supervisor, University of Texas M. D. Anderson Hospital and Tumor Institute, Houston; chairman, publicity and promotion committee, sixth national AORN congress; member of nominating committee, Texas Graduate Nurses' Association, District 9.

LCDR. Helen L. Brooks, R.N.—administration and instruction, operating-room technician training program, U.S. Naval Hospital, San Diego, Calif.; formerly member of the operating-room staff of U.S. Marine Hospital, Boston. She was on hospital ship duty during the Korean conflict.

Creber

Brooks

Sixth National Congress

ASSOCIATION OF OPERATING ROOM NURSES

Shamrock-Hilton Hotel

Houston, Texas

February 9-12, 1959

MONDAY, FEBRUARY 9

Morning Sessions

8:30-11:00—Emerald Room

8:30 **Invocation**
Dr. Dawson Bryan, Director, Institute of Religion, Texas Medical Center, Houston

8:40 **Address of welcome**
The Hon. Lewis Cutrer, Mayor of Houston

8:50 **Subject to be announced**
The Rev. Armen D. Jorjorian, Religious Director and Chaplain, St. Luke's Episcopal Hospital—Texas Medical Center; Chaplain Supervisor, Council for Clinical Training, Houston

9:30-11:00 **Carcinoma of the Lung**
Alton Ochsner, M.D., Professor of Surgery, Tulane University School of Medicine, New Orleans; Director of Surgery, Ochsner Clinic and Ochsner Foundation Hospital

9:30-11:00—Continental Room

9:30-11:00 **Intergroup Relations**
Speakers to be announced

9:30-11:00—Grecian Room

9:30-11:00 **Problem Clinic for Small Hospitals**
MODERATOR—Mrs. Margaret Pond, R.N., Director of Nursing, Heights Hospital, Houston
Participants:
SURGEON—Earl Clawater, M.D., Medical Center Hospital, Tyler, Tex.
ANESTHESIOLOGIST—Sharon Storey, M.D., Director of Anesthesiology Department, Heights Hospital, Houston
ADMINISTRATOR—Horace Cardwell, Administrator, Lufkin (Tex.) Memorial Hospital
DIRECTOR OF NURSES—Dorothy Swickheimer, R.N., Director of Nurses, Victoria (Tex.) Hospital
OPERATING-ROOM SUPERVISOR—Mavis Pate, R.N., Operating-Room Supervisor, Medical Center Hospital, Tyler, Tex.

11:00- 3:00 **Viewing of Exhibits**

Afternoon Sessions

Emerald Room

3:00- 4:15 **Thoracic and Abdominal Aneurysms**
Michael E. DeBakey, M.D., Professor of Surgery, Baylor University College of Medicine, Houston

Grecian Room

4:30- 5:30 **AORN Delegates' Meeting**

TUESDAY, FEBRUARY 10

Morning Sessions

8:30-11:00—Grecian Room

8:30- 9:45 **Recovery and Postanesthesia Units**
PURPOSE AND TYPE OF CARE TO BE RENDERED
M. T. Jenkins, M.D., Anesthesiologist, University of Texas Southwestern Medical School, Dallas
ADVANTAGES
Jerry A. Stirman, M.D., Associate Professor of Surgery, University of Texas Southwestern Medical School, Dallas
STAFFING
Audrey Bell, R.N., Operating-Room Supervisor, Parkland Memorial Hospital, Dallas

9:50-11:00 **Panel Discussion: Pitfalls in the Planning of an Operating-Room Suite**

Moderator: Mrs. Doris Deimel, R.N., Operating-Room Supervisor, Rockaway Beach (N. Y.) Hospital

Participants:

Mrs. Alice McCollum, Operating-Room Supervisor, Methodist Hospital, Houston

Sister M. Margaret Kelly, Supervisor of Special Surgery, St. Joseph's Hospital, Houston

Elizabeth Saunders, R.N., Operating-Room Supervisor, University of Texas Medical Branch Hospitals, Galveston

8:30-11:00—Continental Room

8:30-10:00 **Panel Discussion: Teaching Programs**

Moderator: Frances Brush, R.N., Director of Nursing, Methodist Hospital, Houston

GRADUATE NURSE PROGRAM

Sister Mary Vincent, Administrator, Santa Rosa Hospital, San Antonio, Tex.

PROFESSIONAL STUDENT PROGRAM

Merlyn Maillian, R.N., Operating-Room Supervisor, Hotel Dieu, New Orleans

APPLICATORY PHASE OF O.R. TECHNICIAN AT BROOKE ARMY HOSPITAL, FORT SAM HOUSTON, TEX.

Maj. Jeanne B. McCormick (ANC), Brooke Army Hospital, Fort Sam Houston, Tex.

10:00-11:00 **Utilization of the Housekeeping Department by the Operating-Room Suite**

Euna Brown, R.N., Executive Housekeeper, University of Texas M. D. Anderson Hospital and Tumor Institute, Houston

8:30-11:00—Emerald Room

8:30-11:00 **Panel Discussion: Radiation Protection**

Staff of the University of Texas M. D. Anderson Hospital and Tumor Institute, Houston

PRINCIPLES OF RADIATION PROTECTION

Warren Sinclair, Ph.D., Head, Department of Physics

OPERATING-ROOM PROCEDURES IN RADIOTHERAPY

Lowell Miller, M.D., Assistant Radiotherapist

NURSING RESPONSIBILITY FOR RADIATION PROTECTION AND PATIENT CARE

Renilda Hilkemeyer, R.N., Director of Nursing

THE ROLE OF OPERATING-ROOM NURSING PERSONNEL

Imogene Creber, R.N., Operating-Room Supervisor

APPLICATION OF RADIATION TECHNICS

Color telecast from operating room, University of Texas M. D. Anderson Hospital

11:00- 3:00 **Viewing of Exhibits**

Afternoon Session

3:00-5:00—Emerald Room

3:00- 5:00 **Today's Problem of Infections**

HAND SCRUBS AND SKIN PREPARATIONS

Philip B. Price, M.D., Dean, University of Utah College of Medicine, Salt Lake City

INFECTIONS—MANAGEMENT, PREVENTION AND CONTROL

Ellard M. Yow, M.D., Professor of Medicine, Baylor University College of Medicine, Houston

WEDNESDAY, FEBRUARY 11

Morning Sessions

8:30-11:00—Grecian Room

8:30- 9:30 **Restoration of Hearing by Surgical Technics**

Fred R. Guilford, M.D., Associate Clinical Professor of Otolaryngology, Baylor University College of Medicine, Houston

9:45-11:00 **Recent Developments in Ocular Surgery**

Louis J. Girard, M.D., Professor and Head, Division of Ophthalmology, Department of Surgery, Baylor University College of Medicine, Houston

8:30-11:00—Continental Room

8:30- 9:50 **The Operating Room as a Research Laboratory in the Care of Severe Burns**

Truman G. Blocker, M.D., Professor of Plastic and Maxillofacial Surgery, University of Texas Medical Branch, Galveston

10:00-11:00 **Urology in the Operating Room**

CARE OF UROLOGICAL ENDOSCOPIC INSTRUMENTS

Martha Hild, R.N., Head Nurse in Urology Operating Room, St. Luke's-Texas Children's Hospitals, Houston

THE ARTIFICIAL KIDNEY AND THE ROLE OF THE O.R. NURSE

M. Moira MacLean, R.N., Renal Research Nurse, Renal Laboratory, Georgetown University Medical Center, Washington, D.C.

8:30-11:00—Emerald Room

8:30-10:00 **It Could Happen to You!**

Malpractice Suits and Insurance Coverage for O.R. Nurses

Helen Creighton, R.N., J.D., Assistant Professor, Medical and Surgical Nursing, Georgetown University School of Medicine, Washington, D.C.

10:00-11:00 **Area Sterilization**

John C. Gabel, Sales Manager, Wilmot Castle Co., Rochester, N.Y.

11:00- 3:00 **Election of Officers**

Polls will be open to delegates during this time

11:00- 3:00 **Viewing of Exhibits**

Afternoon Sessions

3:00-5:30—Emerald Room

3:00- 4:30 **Roadblocks to the Supply of Graduate Nurses in the Operating Room**

MODERATOR—Mary V. Schwendeman, R.N., Nursing Consultant and Editor, "ORS," Danbury, Conn.

Participants:

SURGEON—R. Lee Clark, Jr., M.D., Director and Surgeon-in-Chief, University of Texas M. D. Anderson Hospital and Tumor Institute, Houston

ANESTHESIOLOGIST—Charles R. Allen, M.D., Professor and Chairman, Department of Anesthesia, University of Texas Medical Branch Hospitals, Galveston

NURSING EDUCATOR—Faye Pannell, R.N., Dean, School of Nursing, Texas Women's University, Denton, Tex.

DEAN OF NURSES—Virginia M. Brantl, R.N., Associate Professor and Chairman, Department of Medical and Surgical Nursing, University of Texas Medical Branch, Galveston

OPERATING-ROOM SUPERVISORS—Sister Mary Giles, R.N., Surgical Supervisor and Instructor, St. Mary's Hospital, Kansas City, Mo.; Mary Roberts, R.N., Operating-Room Supervisor, VA Hospital, Dallas

CONSULTANT—Alice R. Clarke, R.N., Editorial Consultant, Hillsdale, N.J.

4:30- 5:30 **AORN Delegates' Meeting**

THURSDAY, FEBRUARY 12

Morning Sessions

8:30-11:00—Emerald Room

8:30-11:00 **Special Program on Open-Heart Surgery**

Review of Anatomy and Pathology of Heart

Film Showing Set-Up of Operating Room, Including Special Equipment

Closed-Circuit Telecast of Actual Surgery from University of Texas M. D. Anderson Hospital and Tumor Institute

Denton A. Cooley, M.D., Associate Professor of Surgery, Baylor University College of Medicine, Houston, assisted by the surgical staff from Baylor University College of Medicine and the nursing staff from St. Luke's Episcopal and Texas Children's Hospitals, Houston

2:00 p.m. **Meeting of National AORN Board of Directors**

TUESDAY, FEBRUARY 10, and WEDNESDAY, FEBRUARY 11

8:00-11:00—Bluebonnet and Azalea Rooms

8:00-11:00 **Round-table Discussions on Sterilization of Supplies**

Consultants:

Charles Artandi, Ph.D., Ethicon, Inc.
Velma Chandler, Ph.D., Ethicon, Inc.
John C. Gabel, Wilmot Castle Co.
Henry P. Hamrock, The MacBick Co.
Emil G. Klarmann, Ph.D., Lehn & Fink Products Corp.
M. G. McBane, Wilmot Castle Co.
John J. Perkins, American Sterilizer Co.
Edna A. Prickett, R.N., American Sterilizer Co.
George F. Reddish, Ph.D., Consultant, Vestal, Inc.
Vincent Romito, Aseptic-Thermo Indicator Co.
Earle H. Spaulding, Ph.D., Consultant, Becton, Dickinson and Co.
Mrs. Ethel I. West, R.N., Operating-Room Supervisor, Methodist Hospital of Southern California, Arcadia

For details on Thursday's program on open-heart surgery and on the round-table discussions, including subjects and names of consultants assigned, see pages 110 and 111.

A Glossary of the Microbe World

By Paul F. MacLeod, M.D.*

EDITOR'S NOTE: The following glossary, prepared originally for the International Colloquium on Resistant Infections (see report beginning on page 37), has been expanded by Dr. MacLeod for HOSPITAL TOPICS. We believe it is excellent review material for all O.R. nurses.

Aerobacter aerogenes—a gas-forming organism normally found on grains and plants, in water and in milk, and in the intestinal canals of man and animals. Sometimes causes urinary-tract infections.

aerobes—facultative: grow best in free oxygen; obligate: grow only in presence of free oxygen.

anaerobes—bacteria that grow best without free oxygen; obligate anaerobes require absence of free oxygen; facultative anaerobes are indifferent to it.

bacilli—bacteria having form of straight or slightly bent rods.

bacteria—microscopic, unicellular organisms that reproduce by fission and do not contain photosynthetic pigments.

bacteriophages—believed to be filtrable viruses; various ones are parasitic on specific strains of bacteria.

Candida (Monilia) albicans—a yeastlike fungus which causes infections of the mucous membranes of the mouth (thrush) and the vagina, of the skin, intestines, nails, and respiratory system. *Candida* is also found quite often in the normal mouth and intestinal tract, a fact which makes it difficult to establish its exact role in the diseases.

cocci—bacteria of spherical shape.

coliform bacilli—includes *Escherichia coli, Aerobacter aerogenes,* paracolon bacilli, and *Klebsiella pneumoniae.* Gram-negative.

cytoplasm—protoplasm within bacterial cell, not including nucleus; site of major metabolic activities.

Enterobacteriaciae—the enteric family of bacteria which includes the coliform bacilli, the *Proteus, Serratia, Salmonella* and *Erwinia* genuses. Many of these are pathogenic for man and cause various diseases in the gastrointestinal as well as the urinary and respiratory tracts.

enzymes—compounds produced by living organisms to catalyze chemical reactions involved in metabolism; often named by adding *-ase* to substance (substrate) on which they act; for instance, penicillinase, which acts on penicillin.

Escherichia coli—gram-negative rod normally inhabiting intestinal tract; sometimes causing urinary tract infections and infantile diarrhea.

fungi—mushrooms, toadstools, smuts, rusts, molds, yeasts, mildews. Lacking chlorophyll, they are heterotrophically unable to synthesize food from simple substances. Many are microscopic and unicellular; some are pathogenic.

gram-negative, gram-positive—reactions of bacterial cells to a staining procedure, in which a violet stain is fixed with an iodine solution, then washed with alcohol and restained with a red dye. Gram-positive organisms retain initial violet dye; gram-negative organisms are decolorized by alcohol and take up red dye.

heterotrophic—requiring organic compounds as source of carbon and energy.

Klebsiella pneumoniae—commonly known as Friedlander's bacillus. A species of nonmotile, gram-negative rods belonging to the enteric family of bacteria. Found in lungs in cases of lobar pneumonia and other acute inflammations of the respiratory tract. There is sometimes some confusion between this organism and *Aerobacter aerogenes.*

microbes—unicellular forms of life generally, including bacteria, rickettsiae, viruses, fungi, and protozoa.

Monilia—genus of parasitic fungi which may appear in intestinal tract or elsewhere as overgrowth during antibiotic therapy; modern name is *Candida.*

Mycobacterium tuberculosis—nonmotile, acid-fast, gram-positive rods; causative agent of human tuberculosis.

Paracolon bacilli (Paracolobactrum sp.)—often found in feces during attacks of gastroenteritis. Since this group does not have characteristic antigenic properties, members are often difficult to identify.

parasites—organisms that live off living tissues of other organisms.

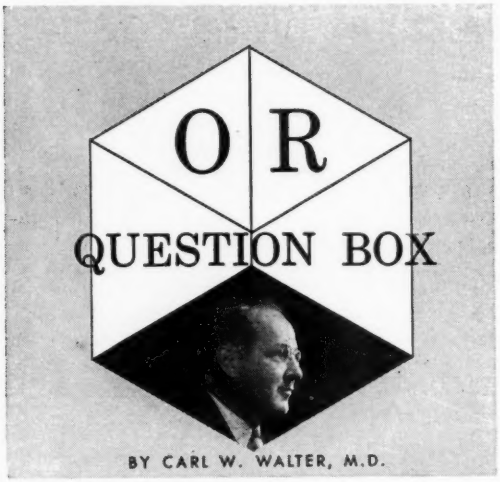
phage-typing, bacteriophage-typing — identifying strains of bacteria by their susceptibility to various bacteriophages, deposited in sequence on a seeded culture; an epidemiologic tool for studying bacteria from related sources to identify reservoirs of infection and routes of transmission. Staphylococci of phage-types 80/81 (susceptible to phages numbered 80 and 81) are involved in many nursery and other epidemics throughout the world.

Proteus—genus of gram-negative, variously shaped rods, mobile with multiple flagella; inhabit intestinal tract; ferment carbohydrates; decompose urea. *Proteus vulgaris, mirabilis, rettgeri* and *morganii* cause uinary-tract and other infections.

Pseudomonas aeruginosa—a species of gram-negative rods, motile with single flagella; inhabit intes-

(Continued on page 122)

*Medical director, Eaton Laboratories.



Assisted by Dorothy W. Errera, R.N.

Q. Can cocaine solution for eye surgery be re-autoclaved without losing its effectiveness?

A. The concentration of resterilized cocaine solution will be affected by evaporation and vapor loss. It is safer to make up the solution in the smallest lots feasible. This avoids air-borne contamination of solutions left exposed to room air for prolonged periods, and insures each patient a little more safety.

Q. Is it acceptable procedure for physicians to have wash basins placed behind them during surgery for washing blood off their gloves?

A. It is difficult and demoralizing to operate with gloves caked with blood and pus. It is logical to provide a basin of germicidal solution or isotonic saline for frequent rinsing of the gloves.

Certain precautions are indicated. A germicide must be selected which is benign and nontoxic in tissues. Grossly contaminated solutions must be changed at decent intervals. When malignancy is found, residual solution from a contaminated glove basin is as capable of carrying tumor cells as a contaminated instrument. The likelihood of carrying infection from deep structures to the superficial layers via the glove basin must also be considered.

Q. Do the new plastic drapes present an electrostatic hazard in the operating room?

A. All materials accumulate an electrostatic charge when moved. The polyvinyl film used in surgical drapes is no exception. Because of its insulating properties and because the sterilized drape is handled by rubber gloves, the electrostatic charge that accumulates during handling of the drape does not bleed off until the drape is placed against the patient's skin. Once this is accomplished, the electrostatic charges are neutralized quickly, and further build-up is prevented by the moist conditions existing on the surgical field.

Even though the use of the plastic drape introduces a minor and transient spark hazard, the benefit that accrues to the patient from its use is so great in comparison that the hazard does not merit consideration. The use of plastics for bacterial barriers is recognized and permitted by paragraph 6-7, Page 21, NFPA Buletin 56, "Recommended Safe Practice for Hospital Operating Rooms," 1958 edition.

Freshly autoclaved polyvinyl chloride contains much moisture and loses its insulating properties. It presents no hazard in the operating room. After being exposed to air for several hours, it gives up its moisture and regains its insulating property. Therefore, if you are concerned about the electrostatic hazard, the problem can be solved by using freshly autoclaved plastic drapes.

Q. Our technic for decontamination of isolation rooms has been defective, and we are in the process of revising it. Would placing a germicidal lamp in the room for a prescribed period of time have any effect?

A. Germicidal lamps are not effective in an isolation room because they do not destroy bacteria hidden in the shadow of objects or in particles of dust. There are data to show that ultraviolet radiation in clean rooms is effective, but in rooms occupied by patients or maintained by the usual housekeeping technics, it is ineffective.

Q. Within what period of time should an abscess occur postoperatively, if it is the result of poor surgical technic?

A. If by poor surgical technic you imply rough handling of tissues, crude technics or retraction, or injudicious use of suture materials, you could expect the patient to show signs of hematoma formation and infection within 24 hours.

If, however, you refer to over-all technics of operating-room function, including control of the environment, signs of sepsis may not appear for a week or 10 days.

Q. What is the correct procedure for taking care of stained operating-room linen? For the same reason the laparotomy sheets are badly stained.

A. Check with your laundry manager to be sure he is leaching blood out with cold water before turning hot water into the washer. Suggest that he also check his wash formula to be sure it is right for the compound and water being used.

Q. Is it considered good technic to use a wet sterile towel on the operative field, if it has been wet and wrung out in sterile water?

A. The danger of contamination in a wet field lies in the possibility that moisture may carry bacteria from the patient and his bedclothing through the sterile drapes. A waterproof barrier must separate the patient and his bacteria from the sterile field. This can be a sheet of waterproof cellophane spread over the field and stands before the laparotomy sheet is applied, or vinyl sheeting which is actually sealed to the patient's skin and covers

the bedclothing and stands as well. Once such a barrier is in place, a wet towel can be placed on the sterile field.

Q. Does alcohol lessen the germicidal properties of soap or detergent containing G-11 when it is used as an arm spray or dip following a surgical scrub?

A. Alcohol applied to a skin cleansed with an agent containing G-11 will leach the hexachlorophene from the skin. This is not completely undesirable, because the hexachlorophene can be returned to the skin by using the soap or detergent immediately after surgery. The hexachlorophene can be retained in the skin by using an alcohol containing hexachlorophene as the spray or dip.

Another technic is use of a 1:750 solution of a quaternary ammonium compound in 50% isopropyl alcohol as a post-scrub dip. The alcohol in this solution also leaches out the G-11, but a protective film of the quaternary is deposited in its stead. Thus contrasting germicidal properties are developed to the utmost.

Q. We are having difficulty with lint in the operating room. What suggestions do you have for controlling it?

A. The control of lint from textiles used in hospitals is accomplished by applying a quaternary ammonium compound in the final rinse in the laundry. Its use in the laundry is advantageous because:

1. It permits greater extraction of water.
2. It accelerates drying.
3. It prevents sticking during ironing.
4. It eliminates static.
5. Lint adheres to it.
6. It renders the textile bacteriostatic.
7. Putrefaction does not occur in soiled linen.
8. It prolongs the life of linen 20 percent.

The treated linen contributes to patient safety by controlling the spread of lint and bacteria in clinical areas.

Q. We have been discussing the value of wearing a cap and mask while setting up a sterile table which contains instruments to be used during deliveries. One nurse believes that wearing a cap and mask is not necessary, because the air itself contains many germs and one does not actually breathe on the table itself. Also, she says a mask loses its value after 20 minutes. She does believe, however, that one must wear both a cap and a mask while using the table during delivery. Will you please straighten us out?

A. The prevention of infection is a major factor in any area of patient care. In the operating and delivery rooms, good technics of sterilization provide a big measure of safety.

One method of bacterial invasion, however, resists control because it is a nebulous one. This is air-borne contamination. Bacteria are everywhere —on clothing, on the floor, on furniture, on skin, and in the nasopharynx. They are freed by motion, and air is the vehicle for their spread. Control of this problem is dependent upon reducing the number of bacteria in the environment and preventing their spread by limiting activity and erecting barriers.

While it is true that the ordinary face mask loses its effectiveness after 30 minutes, it is also true that the mask is the only barrier we are able to erect between the organisms in the nasopharynx and the patient's wound. Few bacteria are freed during quiet breathing; however, it is inconceivable that any nurse would eliminate conversation or expostulation from her daily grind, and the mask is necessary to dilute the effect.

Hair is a notorious problem. It is loaded with dust, lint, and organisms, all of which are freed by motion. From the air, they settle on any exposed surface—sterile or otherwise.

Q. What do you think is responsible for infections that appear two to three months postoperatively?

A. I think these are caused by intermittent bacteremia from thrombophlebitic foci in the lungs.

Q. Wouldn't routine postoperative therapy with antibiotics protect the patient against cross-infection?

A. Routine postoperative antibiotic therapy without specific indications will mask early signs and symptoms of developing infection—and when the antibiotic is stopped, the patient may be deeply and seriously involved in sepsis.

Correction

In the answer to the first question which appeared in this column on page 108 in the November, 1958, issue, there was a typographical error in the instructions for making two percent ethylene-oxide solution. The last sentence should have read, "The two percent solution is readily made by adding two cc. of the liquid ethylene oxide to *100* cc. of cold normal saline," not 1,000 cc. The editors regret the error.

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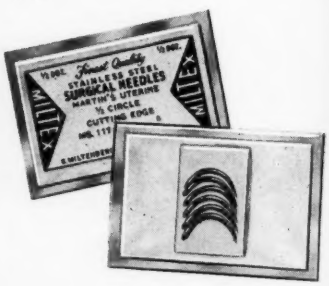

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MICROBE GLOSSARY

(Continued from page 119)

tinal tract; do not ferment carbohydrates nor reduce nitrates; form round, moist, glistening colonies; diffuse bluish-green pigment into medium; highly resistant to most antibiotics; involved in refractory urinary-tract infections; may cause pneumonia in debilitated patients receiving penicillin.

rickettsiae—small micro-organisms usually occurring as intracellular bodies; cultivated outside host only in living tissues and embryonated chicken eggs.

Salmonella—another genus of enteric bacteria. Gram-negative rods, easily cultivated on ordinary media. *Salmonella* causes enteric fevers (such as typhoid fever), gastroenteritis, and septicemias.

saprophytes—organisms that live on dead plants and animals by breaking down chemical constituents.

Shigella—nonmotile, gram-negative rods (of the enteric family of bacteria). Cause of bacillary dysentery in man.

size of bacteria—varies over wide range; length of two microns and diameter of half a micron might be typical. A micron is a millionth of a meter; 12,500 bacteria stretched lengthwise would extend about an inch.

spirilla—spiral-shaped bacterial cells.

spores—inactive resting forms produced within protoplasm of certain bacilli; highly resistant to desiccation, heat, cold, and chemicals; have been known to survive for decades.

Staphylococcus aureus (formerly called *M. pyogenes* var. *aureus*)—spherical, gram-positive, nonmotile cocci, often in grapelike clusters (Cf., staphule, Gr.: grape), which forms a golden yellow pigment (whence aureus) on solid media. Inhabits air, water, surface of body, mucous membrane, and nasopharynx; outstanding cause of furunculosis, pyemia, osteomyelitis, suppuration of wounds, and, with increase in antibiotic-resistant strains, of grave systemic infections. Optimum rate of cell division: every 20 minutes. Ferment carbohydrates, liquefy gelatin. Coagulase-positive (clot blood plasma). They elaborate toxins which can spread through tissue barriers within wound and enterotoxin which figures importantly in gastroenteritis and food poisoning. Can multiply within leukocytes and liberate themselves; remain viable for weeks when dried in pus or on bedding. Some are hemolytic.

streptococci—genus of gram-positive cocci with tendency to form chains. *Streptococcus pyogenes* is distinguished by hemolysis; *Streptococcus viridans*, by greening of blood agar.

viruses—ultra-microscopic infectious agents, 10 to 150 millimicrons in diameter and consequently capable of passing through pores of porcelain filter. Considered to be molecules of nucleoprotein. Identified by host-range filtration and immunologic responses of infected animals.

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- Trip 6—Two-day tour by motor to Cuernavaca and Taxco.
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TOUR M-8

9-DAY PROGRAM

- Motor transfer upon arrival to the Hotel Geneve.
- Eight nights' lodging—room with bath. Seven nights at Hotel Geneve, Mexico City. One night at Rancho Telva, Taxco.
- Trip 1—Sightseeing tour of Mexico City.
- Trip 2—Tour of Xochimilco including boat ride.
- Trip 3—All-day trip to Pyramids and Shrine of Guadalupe and Acolman, including luncheon.
- Trip 4—All-day tour to Puebla and the Pyramid of Cholula, including luncheon.
- Trip 6—Two-day tour by motor to Cuernavaca and Taxco.
- Motor transfer from Hotel Geneve.

• The "problem clinic," a popular session at every national AORN congress, was divided at the 1958 congress into two meetings—one for small hospitals (15 to 75 beds) and one for average and large hospitals. Questions from both these panel discussions have been selected to appear in this column. This month's questions were taken from the session for small hospitals.

PANEL: *Elsie B. Cantwell, R.N.*, executive secretary, Bucks-Philadelphia area, Pennsylvania State Nurses' Association, moderator.

John T. Murphy, M.D., surgical chief, Scranton (Pa.) State Hospital.

J. Earl Maharay, administrator, Memorial Hospital of Greene County, Catskill, N.Y.

Lewis C. Hitchner, Jr., M.D., anesthesiologist, Crozer Hospital, Chester, Pa.

Ruth Smith, R.N., director of nurses, Delaware County Hospital, Drexel Hill, Pa.

Mrs. Julia Boyle, O.R.S., Oxford Hospital, Philadelphia.

Q. What is the legal age in Pennsylvania for cases requiring signed permission for surgery? Also, if a female is a minor, can the husband sign the permit, or must her parents sign it?

MR. MAHARAY: The legal age is 21. A husband may sign for his wife if she is under age; a parent must sign for a child under 21.

Q. Should not residents and interns have the same type of formal training in aseptic technic as required of nursing personnel functioning in the operating room? If so, who should teach it?

DR. MURPHY: All residents and interns in Scranton hospitals have the same training as do student nurses when they first go to the operating room. The operating-room supervisor is primarily responsible for this training. By the way, we find that the incidence of infection in most of our hospitals is the highest during the months in which we get new interns and residents.

Q. Do you think the administrator could control the admission of patients to keep a more balanced schedule of operations?

MR. MAHARAY: I don't see any reason why he shouldn't, if a problem exists. When we had construction under way, and lost eight beds to the construction program, we had to strictly control elective surgery; in fact, we had to control elective admission of all kinds.

Q. What is your opinion of having nonprofessional personnel—practical nurses and/or aides—scrubbing and taking call in the operating room?

DR. MURPHY: I favor the use of nonprofessionals in the operating room. We have four boys who were trained as corpsmen in the services—three in the Navy and one in the Air Force. They also went through a course under our own O.R. supervisors. They make marvelous assistants, because they are stronger than the average nurse.

They can count sponges as well as anybody else, and as technicians they assist just as well and perhaps better than most of the referring physicians.

Q. What about putting them on call at night, if they're the only ones who will come out and take calls at night?

DR. MURPHY: They take their turns. There is always an R.N. with them. That's a *must.*

Q. What does your call system consist of?

MR. MAHARAY: It's customary in our hospital to give the operating-room personnel additional financial compensation — $200 to $300 a year more than they would receive for general nursing duty—plus additional time off for vacation time, for taking calls. We have three girls in the operating room. They take calls every third night and every third weekend.

On the weekends they may come in if they have some work to do. If they don't, they may stay at home or anywhere they can be reached by telephone.

MISS SMITH: We don't particularly believe in a call system, and we don't have it. We have, in our job analysis, outlined the work to be done in the operating room, and have redistributed the work so that it is to our convenience and for the patient's good to have someone on duty in the operating room at all times. Therefore, we have a nurse and an aide on duty at night.

In small hospitals, it is only natural that a nurse is called upon to do things beyond her particular department assignment. Many central supply rooms are associated with the operating room. Much of the autoclaving, much of the supervision of housekeeping duties — checking various linens,

(Continued on next page)

cleaning instruments, checking on inventory—such duties can be performed at night.

We feel that it's fair to give the nurse a full-time appointment so that she can plan her time on an 11-7 tour of duty, and be ready to meet any emergency.

Q. Miss Smith, do you, as the director of nurses in your institution, consult the operating-room supervisor before hiring personnel for the operating room?

MISS SMITH: In our hospital I do the initial interviewing and screening. Then I take the applicant on a tour of the hospital, ending up in the operating room. I introduce the applicant to the supervisor, and then I leave.

The supervisor talks over the situation with the applicant. After the applicant has been told her hours of duty and her job assignment, and has a general understanding of how she will function on the team, she comes down to the nursing office and tells me what she and the supervisor have agreed upon. Thus as a team we all know what our jobs are, and together we plan the care of the patient.

Q. Who is responsible for staffing the recovery room? Do you feel this is part of the operating room?

MISS SMITH: The recovery room should have its own staff. If the O.R. nurse's schedule has been carefully worked out, her time is utilized for the eight hours she's on duty.

However, the recovery-room nurse should know exactly what technics are used in the operating room, so that she can understand her patients' conditions.

She should also be thoroughly instructed by the anesthesiologist, and not release any patient without his approval.

Q. How about using practical nurses? Is it necessary to have an R.N. in the room to direct them? One scrubs and one circulates.

DR. MURPHY: We always have an R.N. in the room at the same time. Every one of our rooms is supervised by a registered nurse.

Q. Who is responsible for canceling a case when the surgeon is late, and putting it at the end of the schedule?

DR. MURPHY: Only one person—the O.R. supervisor!

Q. Is it the supervisor's responsibility then to notify the other people who are associated, say the other surgeon, and the anesthetist who might have to be called in from somewhere else?

DR. MURPHY: Yes.

Q. In our hospital one of the operating-room nurses and the anesthetist take the cases back to the floor. An operating-room nurse tells the nurse who comes to take care of the patient exactly what was removed, and what procedures were carried out. This information is given verbally—it is not written down.

We have been criticized by the doctors. They feel that it's their place to tell the nurses what has been done to the patient. Do you feel that the doctors have any grounds for criticism, Dr. Murphy?

DR. MURPHY: No.

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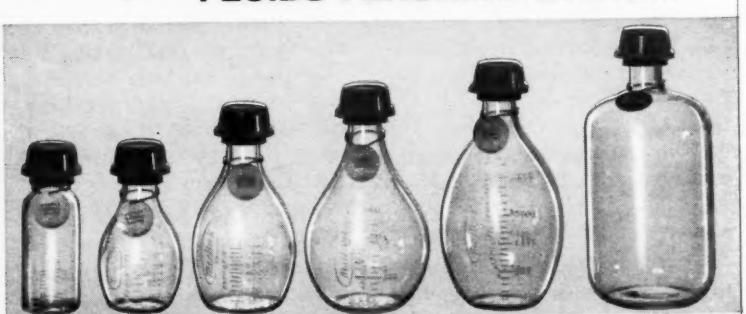

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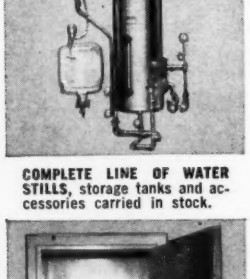

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Dr. Walter to Address CSR Program at AORN Congress

Special Session Offered for First Time

• Carl W. Walter, M.D., associate clinical professor of surgery, Harvard Medical School, and surgeon, Peter Bent Brigham Hospital, Boston, will be the featured speaker at a special program for central service department nurses February 9 at the Shamrock-Hilton Hotel, Houston, Tex.

The program is being given in conjunction with the sixth national congress of the Association of Operating Room Nurses, meeting in Houston February 9-12. Members of the Houston conference group of central service nurses cooperated with AORN officials in planning the program.

Any registered professional nurse who is employed in a central service department is eligible to attend the one-day special session. Nurses are also invited to attend other sessions of the congress which may be of interest to them.

Dr. Walter will discuss "The Professional Nurse in Central Service." He has been asked to evaluate the nurse's role in more efficient care of the patient through inservice education, improved interdepartmental relations, and improved technics and procedures.

He will open the program at 9:45 a.m., and will be the only speaker at the morning session, which closes at 11 o'clock. The audience will have an opportunity for questions after his address.

The complete program appears on this page.

Dr. Walter in 1958 marked his 20th year of teaching operating-room nurses. The week-long institutes which he presents twice a year in various parts of the country have been attended by many central supply supervisors, as well as by O.R. nurses, because the course content includes information on CSR operation and technics.

Author of *Aseptic Treatment of Wounds* (published by the Macmillan Co. in 1948), Dr. Walter has been a consultant to various hospitals and is a frequent lecturer at surgical and hospital meetings. He opened the 1958-59 Becton, Dickinson lecture series on sterilization with a talk on "Environmental Sepsis."

(Continued on page 129)

Dr. Walter

Special Program for Central Service Nurses

At Sixth AORN Congress

SHAMROCK-HILTON HOTEL, HOUSTON, TEX.

MONDAY, FEBRUARY 9, 1959

MORNING SESSION

9:45-11:00 The Professional Nurse in Central Service
Carl W. Walter, M.D., Associate Clinical Professor of Surgery, Harvard Medical School, and Surgeon, Peter Bent Brigham Hospital, Boston.

11:00- 3:00 Visit the Scientific and Technical Exhibits

AFTERNOON SESSION

3:00- 4:00 Comparative Cost Analysis on Disposable and Nondisposable Supplies
G. William Rogers, Director of Marketing Research, Pharmaseal Laboratories, Glendale, Calif.

4:00- 4:30 Sterilization by Electron Beam
Charles Artandi, Ph.D., Manager of Chemical Development, Ethicon, Inc., Somerville, N. J.

4:30- 5:00 Sterilization by Ethylene Oxide Gas
John C. Gabel, Manager of Sales, Wilmot Castle Co., Rochester, N. Y.

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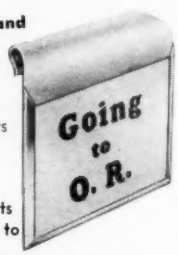

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A Simple Siphon for Initiating Gastric Drainage

By M. Michael Eisenberg, M.D.*

• *The following article is taken from the current practice manual of the Peter Bent Brigham Hospital. This material, which appeared in Bulletin 98 issued by the current practice committee, is reproduced here with the permission of the executive committee of the hospital. Hospital staff members report that they have found the procedure most effective and useful.*

Purpose: To describe a technic for initiating the siphon used in standard Wangensteen suction. To eliminate the use of breakable cumbersome Asepto syringes, now used for this purpose.

Data: The present method of initiating the siphoning action between the second and last bottles in the standard three-bottle suction apparatus consists of inserting the tip of an Asepto syringe into the end of the drainage tube and creating a negative pressure by squeezing the rubber bulb and then releasing it.

Recommendations:

1. A stiff rubber bulb (Davol, 3-oz. capacity), open at both ends, is placed in continuity with the drainage tube by plastic adapters (Davol).

2. To achieve a negative pressure in the tube, the bulb is squeezed, and the drainage tube is pinched off between the thumb and forefinger, distal to the bulb.

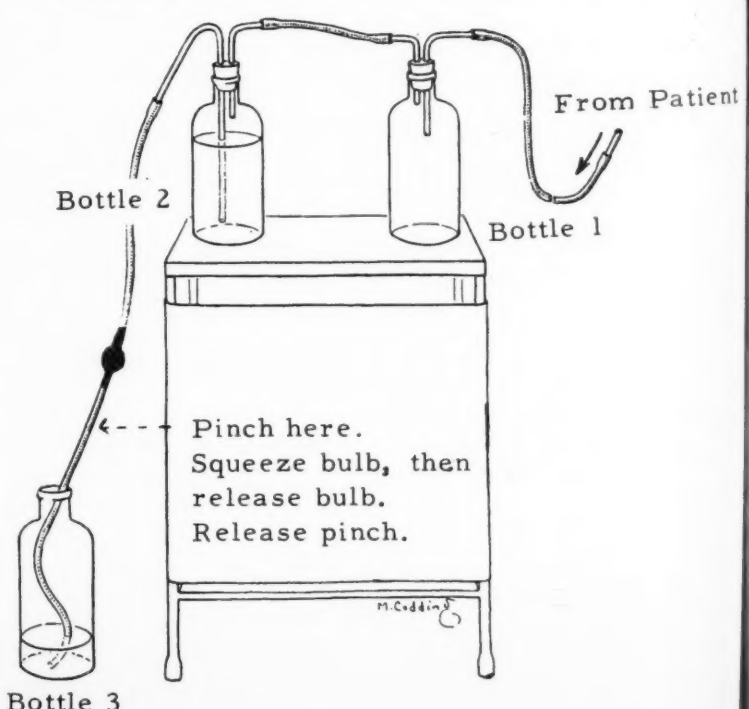
3. The bulb is released, starting the siphon, and the drainage tube pinch is released.

Central Supply Room:

1. The 50" Tygon tubing (for three-foot Wangensteen) and the 66" tubing (for five-foot suction) are severed in half. The rubber

(Continued on next page)

*Dr. Eisenberg was a surgical resident on the house staff of Peter Bent Brigham Hospital, Boston, when he wrote this material.



Above: At a previous AORN congress, nurses cluster around Dr. Walter to ask further questions.

CSR PROGRAM

(Continued from page 127)

He was chairman of the section on "The Hospital Environment" at the recent International Colloquium on Resistant Infections (see report beginning on page 37).

His column, "The O.R. Question Box," in which he answers queries on operating-room and central-supply procedures and technics, is a regular monthly feature of HOSPITAL TOPICS. A collection of the questions most often asked by readers was published by HOSPITAL TOPICS in 1956.

Nurses in central service departments have been invited to attend every AORN congress since the meeting began in 1954. However, this is the first time that a session has been planned especially for them.

Registration fee is $1.50 a day, or $4.00 for the entire three days of the congress. Payment of the registration fee entitles nurses to visit the more than 100 technical exhibits which will be featuring many displays of interest to central service nurses.

The complete program of the AORN congress appears on pages 116-118.

SIMPLE SIPHON continued

bulb, with adapters in place at either end, is connected to each half length of tubing.

2. Wangensteen suction is provided clean, but not sterile. After each use, the adapters and rubber bulb are to be washed in 1:1,000 sodium hypochlorite, rinsed with tap water, and allowed to dry thoroughly before being reassembled in a fresh set-up.

Air Pollution Linked To Additional Diseases

Evidence that air pollution can cause not only lung cancer, but also higher death rates from other diseases, was reported recently at a meeting called by the U.S. Public Health Service in Washington, D.C.

Surgeon General Leroy E. Burney said that investigators are finding a definite association between community air pollution and high mortality rates due to cancer of the respiratory tract, including the lung, cancer of the stomach and esophagus, and arteriosclerotic heart disease.

Discussing the lung cancer problem, Paul Kotin, M.D., University of Southern California pathologist, reported that studies with mice show atmospheric pollution uniquely supplies, in and by itself, the links necessary for the experimental induction of lung cancer. He added that the epidemiological characteristics of the disease strongly suggest a similar action for man.

Thomas F. Mancuso, Ohio State Department of Health, said the excess of lung cancer in urban areas with their heavy air pollution increases by size of city, when smoking patterns are held constant, and varies by geographical areas.

Time-Tried Diack Controls
1909-1959

DIACKS EVERY DAY

There is still no better method of obtaining clean, sterile dressings from an autoclave than the routine use of time-tried Diack Controls.

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Get back to first principles of cleanliness and sterility and *you will control the staph. problem.*

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Smith & Underwood
(Sole Manufacturers of Diack Controls and Inform Controls)
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TRADE TOPICS . . .

John Ehrlich, Ph.D. (r.), laboratory director, antibiotics research, Parke, Davis & Co., presents Robert P. Multhauf, head curator, department of science, Smithsonian Institution, with a container of South American soil—source of the organism which enabled Parke, Davis to produce Chloromycetin, first broad-spectrum antibiotic. The presentation occurred at the sixth annual antibiotic symposium, Washington, D.C., October 15 to 18. News of the meeting was carried in the December Pharmacy section.

American Sterilizer Forms Amsco Europe, N.V.

American Sterilizer Co. has formed Amsco Europe, N.V., after purchasing controlling interest in Van Mideno's Fabriek Voor Metaalwerking, N.V. of Rotterdam, Holland. D. J. Cauchie will serve as managing director.

Amsco Europe will expand Van Mindeno facilities in serving the European Common Market for sterilizers, surgical operating tables, and biological equipment.

Giant Color TV Set Produced By Smith Kline & French

Smith Kline & French Laboratories has produced what is reputed to be the largest color TV "set" in the world—a 1500-pound electronic projector capable of presenting pictures 9 by 12 feet. It was built in Holland by Philips electronics firm for use at U.S. medical meetings.

The device is actually three projectors in one, with each projector sending a different color onto the screen. Overlapping of graded images in the primary colors provides the shadings and variations seen on the screen.

The set will be part of Smith Kline & French's mobile Medical Color Television Unit.

The company has also established an independent research organization in Great Britain to supplement its Philadelphia Research and Development Division and to provide the company with a direct link to European science. Professor William A. Bain, who previously held the chair in Pharmacology at the University of Leeds, will direct the new program.

Abbott Labs Makes Three Advertising Appointments

Abbott Laboratories has named William C. Cray as public relations manager, Thomas A. Craig, assistant public relations manager, and Mary Alice Suydam, media buyer.

Mr. Cray joined Abbott after 15 years of newspaper, editorial, and public relations work. Mr. Craig has been with the company since 1957, after several years with Northwestern University's office of information services. Miss Suydam was previously administrative assistant to the director of purchases.

Also at Abbott, Gordon Washburn, head, Suggestion Service Department, has been elected first vice-president, National Association of Suggestion Systems.

Abbott was recently cited by the association for showing the highest rate of improvement in the number of suggestions per 1,000 employees.

Chemetron Corp. Appoints Four New Dealers

National Cylinder Gas Division, Chemetron Corp., has appointed four new distribution dealers. They are: Avon National Oxygen Co., Springfield, O.; Avon Oxygen and Supply Co., Lima, O.; M. and I. Supply Co., Muskegon, Mich.; and Hughes Auto Supply, Salem, Ind.

Johnson & Johnson Names Two Vice-Presidents

Johnson & Johnson has named James D. Lierman as vice-president, Hospital Division, and James E. Burke, vice-president, Merchandising and Advertising. Mr. Burke was previously director, Merchandising and Advertising Department, and Mr. Lierman director, Hospital Division.

Colson Corp. Appoints Two Regional Sales Managers

Mr. Messmer

Mr. Ruppel

The Colson Corp. has appointed E. L. Messmer, head, distributor sales, and W. W. Ruppel, supervisor, direct selling effort.

Mr. Messmer was previously New York branch manager, and Mr. Ruppel formerly managed the San Francisco regional office.

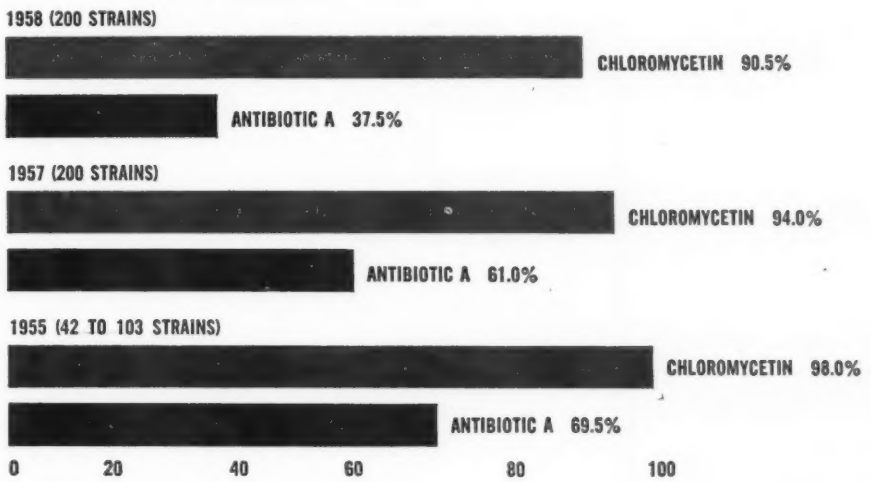
(Continued on page 130)

EFFECTIVE AGAINST MOST STRAINS OF STAPHYLOCOCCI

CHLOROMYCETIN®

COMBATS MOST CLINICALLY IMPORTANT PATHOGENS

IN VITRO SENSITIVITY OF PATHOGENIC STAPHYLOCOCCI TO CHLOROMYCETIN AND TO ANOTHER WIDELY USED BROAD-SPECTRUM ANTIBIOTIC FOR 1958, 1957, and 1955*



*Adapted from Holloway, W. J., & Scott, E. G.: *Delaware M. J.* 30:175, 1958.
In this study CHLOROMYCETIN and Antibiotic A were used in identical strengths of 5 mcg.

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in a variety of forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

PARKE, DAVIS & COMPANY · DETROIT 32, MICHIGAN

71489

(Continued from page 138)

News Briefs

Gus Wallin—has been appointed operations manager, Coleman Instruments Inc. He was formerly president, Electronics Division, Bell & Howell Co.

* * *

John T. McLoughlin—has been named vice-president for market development planning, Nutritional and Pharmaceutical Division, Mead Johnson & Co. Previously, he was vice-president and assistant to the president, Esterbrook Pen Co. He has also been associated with Johnson and Johnson, as director, Surgical Dressings Division.

* * *

Justin M. McCarthy—has been appointed manager, clinical associates section, Wyeth Laboratories. He succeeds **Leo H. Schultenover** who has been promoted to a new post in Wyeth's medical promotion department. Mr. McCarthy was previously territory manager and clinical associate in the Minneapolis area.

* * *

Clarke Floor Machine Co.—is the new name of Clarke Sanding Machine Co. The change was made to express more accurately the company's product diversification. The company also recently purchased a new manufacturing plant in Muskegon, Mich.

* * *

Fisher Scientific Co.—has opened a new manufacturing division in Indiana, Pa. The 115,000 sq. ft. building features continuous flow from incoming materials to the finished instruments and appliances.

* * *

T. H. Gibson—has been appointed national sales manager, Food Service Equipment Division, Wearever Aluminum, Inc. He succeeds Buford E. Hiles, vice-president in charge of sales, who had been serving as sales manager of the division. **W. E. Cummins** succeeds Mr. Gibson as sales manager, Cleveland and Pittsburgh districts.

* * *

Robert V. Curley—has been appointed sales representative, Walker China Co. He will cover North and South Carolina, Tennessee, Alabama, Georgia, and Florida, and have his headquarters in Atlanta, Ga.

* * *

Thomas D. Laughlin—has been promoted to institutional sanitation consultant, Klenzade Products, Inc. He was previously in charge of the Institutional Division.

* * *

O. H. Jones—has been named Conco Surgical Products representative in North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, and Minnesota. He was previously associated with Raytheon, and is now carrying Everest and Jennings Wheel Chairs, Coloplast, and Kendrick.

New

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INSTRUMENT

MILK

♦Prevents Instruments from Rusting
♦Keeps Box Locks Free
♦Permits Autoclaving of Sharps
♦Saves Valuable Time

Here's how it works:

A few cents a day assures your operating staff of rust-free, lubricated instruments. After cleansing, *dip* whole tray of instruments including sharps. Then autoclave. No rinsing, no wiping!

One gallon of Instrument-Milk concentrate makes six gallons of non-oily, non-sticky bath —a month's supply!

ORDER FROM YOUR SURGICAL DEALER TODAY!

1-GALLON $12.50

Manufactured and Guaranteed by

Snowden-Pencer Corporation

Manufacturers of Ochsner "Diamond Jaw" Needle Holder and Ochsner "Diamond Edge" Scissors

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BLICKMAN O.R. EQUIPMENT ALWAYS BETTER... NOW COSTS LESS, TOO!

BLICKMAN OPERATING ROOM EQUIPMENT has *always* been recognized as the unchallenged leader in quality... hailed as a wise investment in terms of long, maintenance-free, service life. Now this same equipment, its quality and design unaltered, is available to you *at prices so low you wouldn't believe them possible!*

These lower-than-ever prices are the result of recent efficiencies introduced to Blickman's production process. We simply passed the savings on to you!

Prove these facts for yourself! Ask your dealer for a feature by feature, price by price comparison *before* you buy. See why—*now more than ever, Blickman is your best buy.*

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See us at the AORN Convention, Shamrock-Hilton Hotel, Houston, Texas February 9-11, Booth No. 78

"Sold through Blickman Authorized Hospital Equipment Dealers".

Look for this symbol of quality Blickman-Built

BLICKMAN
HOSPITAL EQUIPMENT

The Book Corner

Guide for Dietitians

The first edition of the *Diet Manual of the East Orange General Hospital*, East Orange, N. J., is a cooperative undertaking on the part of the hospital's dietitians, plus a number of staff physicians.

Purpose of the manual is outlined in its introduction: "The feeding of the patient is the responsibility of the hospital. The hospital can discharge this responsibility properly only if the physician prescribes the diet in terms that are understandable to the staff dietitians. The diet prescription must be such as to be translated into palatable, acceptable meals that contain the nutrients in amounts required by the patient as modified by his illness."

Concise and workmanlike in execution, and attractively designed, the 142-page spiral-bound book summarizes and standardizes the most important of the therapeutic diets commonly prescribed by the hospital's physicians. However, it is designed to provide considerable latitude for the dietetic staff.

Along with listings and general rules for the various diets, the manual gives lists of allowable foods, and foods to be avoided, with a nutritive analysis in each case. Indications for use are stated solely for the instruction of student nurses, student dietitians, and interns.

Editors of the manual are Gordon V. Stoddard, M.D., attending physician, and Rowland D. Goodman, M.D., associate attending physician, both of the department of cardiology, and Carolyn Sebastianelli, director of dietetics.

Community Problem

REHABILITATION, A COMMUNITY CHALLENGE. By W. Scott Allen, John Wiley & Sons, 1958, 247 pp. $5.75.

"A big word with a bigger purpose" is the way W. Scott Allen describes rehabilitation. He then tells why the scope and potentials in this field are so overwhelming when measured in human values.

Rehabilitation, in its most effective application, is not an exclusive domain of particular professions or disciplines; it is not limited to the realm of specific facilities or techniques; nor can it be confined as a monopoly of single agencies or programs. Rather, it must be a collective approach directed to maximum restoration of people for fuller social existence and vocational usefulness. Rehabilitation must be thought of as a total community problem, constituting a challenging medical and social opportunity that calls for nothing less than comprehensive community planning.

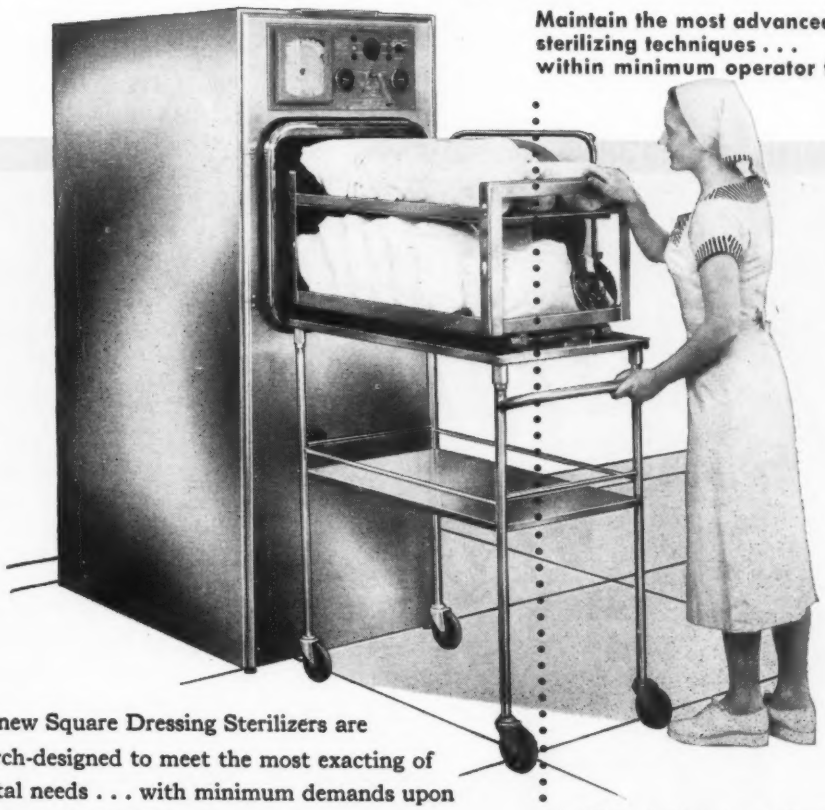
"Rehabilitation, a Community Challenge," opens by orienting the reader to fundamental concepts and currently accepted theories on rehabilitation; what it is, and what it isn't. Its unembellished,

(Continued on page 136)

SEE DISPLAY OF RUSCH CATHETERS — BOOTH 80 AT THE AORN MEETING

American
SQUARE DRESSING STERILIZERS

Maintain the most advanced sterilizing techniques . . . within minimum operator time



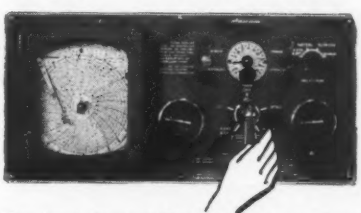
The new Square Dressing Sterilizers are research-designed to meet the most exacting of hospital needs . . . with minimum demands upon the time and attention of operating personnel.

The roomy square chamber readily accepts three large trays . . . for maximum production and dependable sterilization of dressings, tray sets, syringes and needles, rubber gloves, flasked fluids and related surgical supplies.

Made in the Amsco tradition for long, dependable service, the Square Dressing Sterilizer reflects the skills of more than sixty years of thoughtful and continuing research.

Write for Bulletin C-162

Unitized Control Panel



Eye level Control Panel includes Indicating — Recording — Controlling Thermometer and Cyclomatic Control. Simple, direct and positive, Cyclomatic Control begins timing when the selected temperature is reached, sterilizes, exhausts, and dries the load . . . AUTOMATICALLY. Saves steps and time for the operator, materials and steam for the hospital, and worry and uncertainty for the staff.

AMERICAN STERILIZER
ERIE • PENNSYLVANIA

WORLD'S LARGEST DESIGNER and MANUFACTURER of SURGICAL STERILIZERS, TABLES, LIGHTS and RELATED PRODUCTS.

jargon-free prose then traces the history of rehabilitation and spells out its future goals. Having defined the incidence of physical and neurological impairments, in a way that clearly delineates their social consequences and economic waste, the author describes the roles played by medical and paramedical disciplines in total attack on problems of the handicapped.

An inescapable conclusion emerges upon careful reading of "Rehabilitation, a Community Challenge"—it is exactly that, a challenge, calling for team effort of the highest order. After grasping the full significance of this thought-provoking book, few hospitals would knowingly side-step their share of responsibility in total community planning and action in the field of rehabilitation.

Along with short-term mental care, organized rehabilitation as an integral part of general hospital service is rapidly coming to the fore. Therefore, to develop an early speaking acquaintanceship with the subject should be an objective of serious students of the changing hospital scene.—Carl I. Flath, Associate Consultant, John G. Steinle and Associates, Garden City, N.Y.

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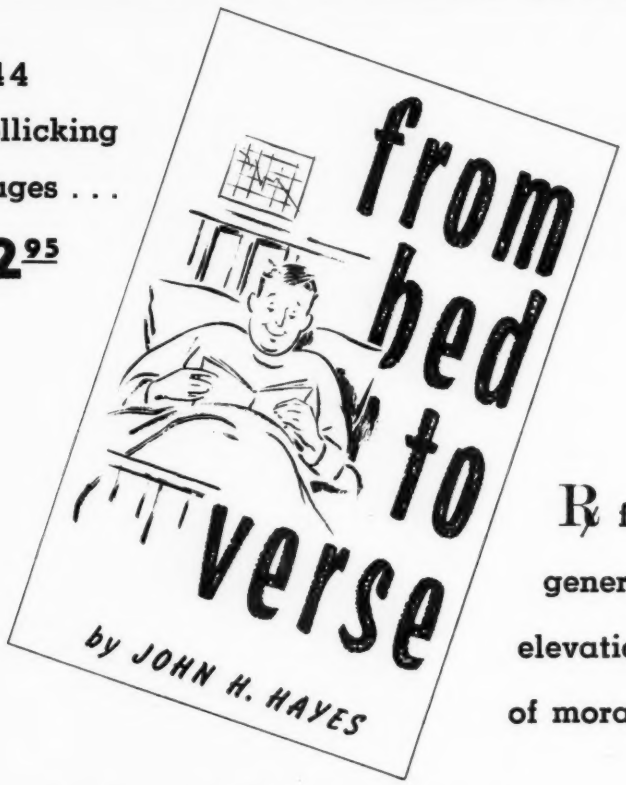
144 rollicking pages . . . $2.95



℞ for general elevation of morale

By the outstanding medical humorist of our time . . .

Gems from PRO RE NATA, the column that has kept the medical world chuckling since its first appearance in *Hospitals,* Journal of the American Hospital Association

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Postage Paid (in U.S. only) if remittance accompanies order.

Physicians' Record Company

161 W. Harrison Street • Chicago 5, Illinois

Pharmacy Handbook

PHARMACY SERVICE IN SMALLER HOSPITALS. College of Pharmacy, University of Michigan, Ann Arbor, 1958. 263 pp.

Designed for community pharmacists and administrators of smaller hospitals, this handbook provides material for pharmaceutical organization and activity.

An overall view of hospital pharmaceutical service, complete with statistics, is given in the introductory sections. From there, the material branches into the more specific topics of affiliation principles, procedural guides, and resource references.

Information is illustrated by charts and selected articles, by persons familiar with the pharmacy field. Some topics discussed are responsibilities and functions, organization, personnel, safety, storage, drug stocks, purchasing, and the hospital formulary.

Available from the University of Michigan, College of Pharmacy, Ann Arbor.

Birth Defects

WILL MY BABY BE BORN NORMAL? By Joan Gould. Public Affairs Pamphlet No. 272. 1958. 20 pages. 25 cents.

Explaining why a small proportion of babies are born defective and how to prevent some of these abnormalities is the purpose of this pamphlet.

Stressing that nobody is to blame for these defects, the pamphlet lists some of the diseases or accidents that may affect the unborn child and discredits the belief that all defects are caused by injuries to the mother.

Available from the Public Affairs Committee, 22 East 38th Street, New York, N.Y.

speaking of Quality...

More than 50 years of service to the medical profession underwrites the quality of Bardic® Polyvinyl Products . . . quality that is guaranteed by C. R. Bard, Inc.

The modern polyvinyl plastic tubing used in Bardic sets is specially formulated to meet the functional requirements of each type of intubation therapy.

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The many advantages of Bardic Polyvinyl Products will be of interest to your hospital:

- **greater patient comfort and protection**
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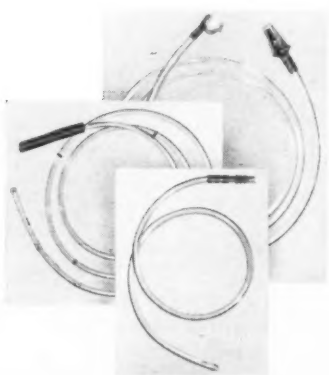

Now available . . . 22 items in nine types . . . write for descriptive brochure illustrating the complete Bardic line.

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A NEW Criterion for Fine Surgeon's Instruments

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Fine Surgical Instruments and Hospital Equipment

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330 South Honore Street — Chicago 12, Illinois

Dallas • Houston • Los Angeles • Rochester, Minn.

Armamentarium

Michigan State Offers Food Service Course

A food service supervisor course will be offered at Michigan State University, East Lansing, from February 2 through April 3 with a final week seminar from October 5 to 9. The seminar will be used to interpret the teaching of the first nine weeks, and students will be encouraged to ask questions and share their hospital experiences during the interim months.

Personnel trained in the program are equipped to function more effectively either with or without a dietitian's supervision. They will receive instruction in management skills, basic food production principles, menu planning, purchasing, personnel relations and communications skills, nutrition and diet planning, sanitation, safety, supervision, employee training, and cost control.

Hospitals may obtain further information and an application card from Food Service Supervisor Training Program, Continuing Education Services, Kellogg Center, Michigan State University, East Lansing, Mich.

Fifty % of Foreign-Trained Pass U.S. Medical Exam

Fifty percent of the foreign-trained physicians taking the first world-wide American medical qualification examination on September 23, 1958, passed, and will receive certification by the Educational Council for Foreign Medical Graduates.

The examination, held in 30 U.S. and 30 foreign centers, is designed to certify physicians possessing medical knowledge reasonably equivalent to that expected of graduates of approved American and Canadian medical schools and having satisfactory facility in the English language.

In addition to the 418 out of 844 that passed, 226 came sufficiently close to passing to earn temporary certificates, which will qualify them to study not more than two years as interns or residents in U.S. hospitals.

Qualifying examinations for 1959 are scheduled on a world-wide basis for February 17th and September 22nd. In the first examination of this type 52 percent of 300 applicants tested passed.

Pharmacy Research Paper Award Judges Announced

Research papers for the 5th annual Lunsford Richardson Pharmacy Awards competition will be judged by Samuel W. Goldstein, Ph.D., director, American Pharmaceutical Association; Melvin W. Green, Ph.D., director, educational relations, American Council on Pharmaceutical Education; and Louis C. Zopf, Dean, College of Pharmacy, State University of Iowa.

Four $500 and two $100 awards will be made. An additional $2000 will be given to the colleges where the winning students are enrolled by the sponsor, Vick Chemical Co. and its subsidiaries, Wm. S. Merrell Co., National Drug Co., and Walker Laboratories.

Hospital Public Relations Check Points Listed

Key points for a hospital to use in reviewing how well it has kept the public informed of its activities and programs have been outlined by Lee Hastings Bristol, Jr., public relations director, Bristol-Myers Products Division, New York City.

In a recent issue of the Western New York Hospital Council's *Newsletter*, he asked:

"1. Is your public relations program a truly year-round one, or is it overloaded too much at fund-raising time?

"2. Are you telling your story to newcomers?

"3. Are you reminding even your old-timers about the hospital —its work and its current problems? (The memory of the public is often only one campaign long!)

"4. Does your public relations program help recruit volunteer workers for the hospital?

"5. Does your public relations program impress the public with the vitality of your hospital's leadership? (The public should be informed of new activities, as well as current achievements, of the hospital.)

"6. Does your hospital make an effort to acquaint the public with your facilities?

"7. In your search for ideas, do you keep yourself on the alert for ideas in other fields which can be borrowed and put to work in your own?"

YOU SAVE money for your hospital when you buy Gudebrod silk and cotton sutures.

Sterilize Gudebrod sutures as you need them and save **UP TO 50%** of your suture **COST.** Every improvement **IN** non-absorbable sutures is incorporated in these **SUTURES** . . . manufactured by Gudebrod for eighty-nine years.

Reduce costs **WITH** no sacrifice in quality. Buy **GUDEBROD** and save. Write for the Gudebrod story, "How You Can Save up to 50% of Your Suture Cost."

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CHICAGO BOSTON LOS ANGELES

Ten Scholarships Available For Housekeeping Course

Ten scholarships, each about $300, will be available for the 11th annual short course in Hospital Housekeeping to be held March 30 to May 21, at the Kellogg Center for Continuing Education, Michigan State University, East Lansing. The scholarships, sponsored by the American Hospital Association and the university, will be available through a grant from Huntington Laboratories, Inc., Huntington, Ind.

The course acquaints students with latest hospital housekeeping technics in sanitation and administration. Enrollment is limited to 40 people.

Scholarship deadline application is February 9. For details write: American Hospital Association, Huntington Laboratories Educational Fund, 18 E. Division, Chicago 10.

X-Ray Registry Changes Technician Requirements

The American Registry of X-Ray Technicians has announced that after July, 1960, the minimum requirements for certification will be two years of full-time training or experience under the direct supervision of a recognized medical radiologist.

Previously, the requirement was one year of training under a radiologist and either one additional year under a radiologist or two years' training under a non-radiologist M.D.

Technicians now enrolled in a one-year training course under a radiologist should not depend on qualifying for ARXT certification by accepting a position with a non-radiologist because the two-year period cannot be completed prior to July 1, 1960. The Registry recommends that they arrange to acquire their second year of experience under radiological supervision.

Administrator to Study English Mental Hospitals

Arthur L. Seale, M.D., superintendent, Central Louisiana State Hospital, Pineville, is being sent abroad to study England's open mental hospitals by the Louisiana Association for Mental Health and the State Department of Hospitals.

He will include Horton Road and Coney Hill Hospitals, Gloucester, in his tour.

Nurse-for-a-Day Program Held at Buffalo General

A "Nurse-for-a-Day" program, at Buffalo (N.Y.) General Hospital School of Nursing in October, attracted 190 high school students interested in the nursing field.

The affair's purpose was to give prospective student nurses an opportunity to see first hand the facilities of the institution's school for professional nurses.

University of Pittsburgh Opens Health Law Center

The establishment of a health law center extends the University of Pittsburgh's activities into the comparatively unexplored field of health and hospital jurisprudence.

Functioning with the graduate school of public health, the center is an outgrowth of a 2-year hospital law research study made possible by a $234,528 grant from the National Institutes of Health.

Director of the center is John F. Horty, Jr., an attorney and associate research professor of health law who has participated in the hospital law study since its inception in September, 1956.

Publication of the results of the 48-state research project will be the first task of the center. Findings will be presented in two volumes, to be published in February, 1959. One of the volumes will be for hospital administrators, the other for hospital attorneys.

WHEN A TIME-TESTED PRODUCT GETS A NEW, TIME-SAVING PACKAGE...

RESULT... ease of application — while it's still in the package, blade can be attached to knife handle

RESULT... strong, sturdy package — puncture proof, moisture proof wrap withstands repeated handling and can be autoclaved

RESULT... complete blade protection — maximum sharpness of these traditionally superior **carbon** steel blades assured

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"...effective iron preparation for intramuscular injection..."

Published reports[1-16] confirm the advantages of IMFERON when parenteral iron is preferable in iron deficiency anemias; pregnancy; infancy; resistant hypochromic anemias; geriatric patients; blood loss; patients with peptic ulcer, ulcerative colitis; intolerance to oral iron. Easy to administer, notably free from unpleasant or toxic effects, quickly absorbed and utilized, IMFERON produces prompt hematologic and clinical improvement.

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